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FIGURE 1

ATCGGTTAGCGCCTTGCC**ATG**ATTAATCCAGAGCTGCGGGATGGCAGAGCTGATGGCTTCATACATCGGATAGTT
CCCAAGTTGATACAAAACTGGAAGATTGGCCTTATGTGCTTCCTGAGTATTATTATTACTACAGTTTGCATTATT
ATGATAGCCACATGGTCCAAGCATGCTAAACCTGTGGCATGTTCAGGGGACTGGCTTGGAGTGAGAGATAAGTGT
TTCTATTTTTCTGATGATACCAGAAATTGGACAGCCAGTAAAATATTTTGTAGTTTGCAGAAAGCAGAACTTGCT
CAGATTGATACACAAGAAGACATGGAATTTTTGAAGAGGTACGCAGGAACTGATATGCACTGGATTGGACTAAGC
AGGAAACAAGGAGATTCTTGGAAATGGACAAATGGCACCACATTCAATGGTTGGCCATCAAACTCCAAATGGTCT
TGCAACTGGAGCCTCCGACAATGGCTTCTTCTGCTGGGACCCCTTAGA**TAG**GCCTCTGAGGGAGCTCTGACTGCC
GTTTCCCCAAAACAATGTCCCCTGTCAGCAGGAAGCAGTTAAATCAGTCTTCATCCTTATCCTTAATATAACGGC
AGTTAGATGTACTTCTTTAGAGGGAGTAAATTTATCAATTCAGAGCAATTCATCCTCCTCTTTCCATCTTTGATT
CACAGTTAATAGGCTATAAATTTTGATAATGTAGAATAAACTACAGAAAACTTCTTG

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FIGURE 2

MINPELRDGRADGFIHRIVPKLIQNWKIGLMCFLSIIITTVCIIMIATWSKHAKPVACSGDWLGVRDKCFYFSDD
TRNWTASKIFCSLQKAELAQIDTQEDMEFLKRYAGTDMHWIGLSRKQGDSWKWTNGTTFNGWPSNSKWSCNWSLR
QWLLLLGPLR

FIGURE 3

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ATCTGTGGGAGCAGTTTATTCCAGTATCACCCAGGGTGCAGCCACACCAGGACTGTGTTGAAGGGTGTTTTTTTT
CTTTTAAATGTAATACCTCCTCATCTTTTCTTCTTACACAGTGTCTGAGAACATTTACATTATAGATAAGTAGTA
CATGGTGGATAACTTCTACTTTTAGGAGGACTACTCTCTTCTGACAGTCCTAGACTGGTCTTCTACACTAAGACA
CCATGAAGGAGTATGTGCTCCTATTATTCCTGGCTTTGTGCTCTGCCAAACCCTTCTTTAGCCCTTCACACATCG
CACTGAAGAATATGATGCTGAAGGATATGGAAGACACAGATGATGATGATGATGATGATGATGATGATGATGATG
ATGATGATGAGGACAACTCTCTTTTTCCAACAAGAGAGCCAAGAAGCCATTTTTTTCCATTTGATCTGTTTCCAA
TGTGTCCATTTGGATGTCAGTGCTATTCACGAGTTGTACATTGCTCAGATTTAGGTTTGACCTCAGTCCCAACCA
ACATTCCATTTGATACTCGAATGCTTGATCTTCAAAACAATAAAATTAAGGAAATCAAAGAAAATGATTTTAAAG
GACTCACTTCACTTTATGGTCTGATCCTGAACAACAACAAGCTAACGAAGATTCACCCAAAAGCCTTTCTAACCA
CAAAGAAGTTGCGAAGGCTGTATCTGTCCCACAATCAACTAAGTGAAATACCACTTAATCTTCCCAAATCATTAG
CAGAACTCAGAATTCATGAAAATAAAGTTAAGAAAATACAAAAGGACACATTCAAAGGAATGAATGCTTTACACG
TTTTGGAAATGAGTGCAAACCCTCTTGATAATAATGGGATAGAGCCAGGGGCATTTGAAGGGGTGACGGTGTTCC
ATATCAGAATTGCAGAAGCAAAACTGACCTCAGTTCCTAAAGGCTTACCACCAACTTTATTGGAGCTTCACTTAG
ATTATAATAAAATTTCAACAGTGGAACTTGAGGATTTTAAACGATACAAAGAACTACAAAGGCTGGGCCTAGGAA
ACAACAAAATCACAGATATCGAAAATGGGAGTCTTGCTAACATACCACGTGTGAGAGAAATACATTTGGAAAACA
ATAAACTAAAAAAAATCCCTTCAGGATTACCAGAGTTGAAATACCTCCAGATAATCTTCCTTCATTCTAATTCAA
TTGCAAGAGTGGGAGTAAATGACTTCTGTCCAACAGTGCCAAAGATGAAGAAATCTTTATACAGTGCAATAAGTT
TATTCAACAACCCGGTGAAATACTGGGAAATGCAACCTGCAACATTTCGTTGTGTTTTGAGCAGAATGAGTGTTC
AGCTTGGGAACTTTGGAATGTAATAATTAGTAATTGGTAATGTCCATTTAATATAAGATTCAAAAATCCCTACAT
TTGGAATACTTGAACTCTATTAATAATGGTAGTATTATATATACAAGCAAATATCTATTCTCAAGTGGTAAGTCC
ACTGACTTATTTTATGACAAGAAATTTCAACGGAATTTTGCCAAACTATTGATACATAAGGGTTGAGAGAAACAA
GCATCTATTGCAGTTTCTTTTTGCGTACAAATGATCTTACATAAATCTCATGCTTGACCATTCCTTTCTTCATAA
CAAAAAAGTAAGATATTCGGTATTTAACACTTTGTTATCAAGCACATTTTAAAAAGAGCTGTACTGTAAATGGAA
TGCTTGACTTAGCAAAATTTGTGCTCTTTCATTTGCTGTTAGAAAAACAGAATTAACAAAGACAGTAATGTGAAG
AGTGCATTACACTATTCTTATTCTTTAGTAGCTTGGGTAGTACTGTAATATTTTTAATCATCTTAAAGTATGATT
TGATATAATCTTATTGAAATTACCTTATCATGTCTTAGAGCCCGTCTTTATGTTTAAAACTAATTTCTTAAAATA
AAGCCTTCAGTAAATGTTCATTACCAACTTGATAAATGCTACTCATAAGAGCTGGTTTGGGGCTATAGCATATGC
TTTTTTTTTTTTAATTATTACCTGATTTAAAAATCTCTGTAAAAACGTGTAGTGTTTCATAAAATCTGTAACTCG
CATTTTAATGATCCGCTATTATAAGCTTTTAATAGCATGAAAATTGTTAGGCTATATAACATTGCCACTTCAACT
CTAAGGAATATTTTTGAGATATCCCTTTGGAAGACCTTGCTTGGAAGAGCCTGGACACTAACAATTCTACACCAA
ATTGTCTCTTCAAATACGTATGGACTGGATAACTCTGAGAAACACATCTAGTATAACTGAATAAGCAGAGCATCA
AATTAAACAGACAGAAACCGAAAGCTCTATATAAATGCTCAGAGTTCTTTATGTATTTCTTATTGGCATTCAACA
TATGTAAAATCAGAAAACAGGGAAATTTTCATTAAAAATATTGGTTTGAAAAAAAAAAAAAAAAA
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FIGURE 4

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MKEYVLLLFLALCSAKPFFSPSHIALKNMMLKDMEDTDDDDDDDDDDDDDDEDNSLFPTREPRSHFFPFDLFPM
CPFGCQCYSRVVHCSDLGLTSVPTNIPFDTRMLDLQNNKIKEIKENDFKGLTSLYGLILNNNKLTKIHPKAFLTT
KKLRRLYLSHNQLSEIPLNLPKSLAELRIHENKVKKIQKDTFKGMNALHVLEMSANPLDNNGIEPGAFEGVTVFH
IRIAEAKLTSVPKGLPPTLLELHLDYNKISTVELEDFKRYKELQRLGLGNNKITDIENGSLANIPRVREIHLENN
KLKKIPSGLPELKYLQIIFLHSNSIARVGVNDFCPTVPKMKKSLYSAISLFNNPVKYWEMQPATFRCVLSRMSVQ
LGNFGM
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FIGURE 5

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GATCCCAGACCTCGGCTTGCAGTAGTGTTAGACTGAAGATAAAGTAAGTGCTGTTTGGGCTAACAGGATCTCCTC
TTGCAGTCTGCAGCCCAGGACGCTGATTCCAGCAGCGCCTTACCGCGCAGCCCGAAGATTCACTATGGTGAAAAT
CGCCTTCAATACCCCTACCGCCGTGCAAAAGGAGGAGGCGCGGCAAGACGTGGAGGCCCTCCTGAGCCGCACGGT
CAGAACTCAGATACTGACCGGCAAGGAGCTCCGAGTTGCCACCCAGGAAAAAGAGGGCTCCTCTGGGAGATGTAT
GCTTACTCTCTTAGGCCTTTCATTCATCTTGGCAGGACTTATTGTTGGTGGAGCCTGCATTTACAAGTACTTCAT
GCCCAAGAGCACCATTTACCGTGGAGAGATGTGCTTTTTTGATTCTGAGGATCCTGCAAATTCCCTTCGTGGAGG
AGAGCCTAACTTCCTGCCTGTGACTGAGGAGGCTGACATTCGTGAGGATGACAACATTGCAATCATTGATGTGCC
TGTCCCCAGTTTCTCTGATAGTGACCCTGCAGCAATTATTCATGACTTTGAAAAGGGAATGACTGCTTACCTGGA
CTTGTTGCTGGGGAACTGCTATCTGATGCCCCTCÀATACTTCTATTGTTATGCCTCCAAAAAATCTGGTAGAGCT
CTTTGGCAAACTGGCGAGTGGCAGATATCTGCCTCAAACTTATGTGGTTCGAGAAGACCTAGTTGCTGTGGAGGA
AATTCGTGATGTTAGTAACCTTGGCATCTTTATTTACCAACTTTGCAATAACAGAAAGTCCTTCCGCCTTCGTCG
CAGAGACCTCTTGCTGGGTTTCAACAAACGTGCCATTGATAAATGCTGGAAGATTAGACACTTCCCCAACGAATT
TATTGTTGAGACCAAGATCTGTCAAGAGTAAGAGGCAACAGATAGAGTGTCCTTGGTAATAAGAAGTCAGAGATT
TACAATATGACTTTAACATTAAGGTTTATGGGATACTCAAGATATTTACTCATGCATTTACTCTATTGCTTATGC
CGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 6

MVKIAFNTPTAVQKEEARQDVEALLSRTVRTQILTGKELRVATQEKEGSSGRCMLTLLGLSFILAGLIVGGACIY
KYFMPKSTIYRGEMCFFDSEDPANSLRGGEPNFLPVTEEADIREDDNIAIIDVPVPSFSDSDPAAIIHDFEKGMT
AYLDLLLGNCYLMPLNTSIVMPPKNLVELFGKLASGRYLPQTYVVREDLVAVEEIRDVSNLGIFIYQLCNNRKSF
RLRRRDLLLGFNKRAIDKCWKIRHFPNEFIVETKICQE

FIGURE 7

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CGAACTCTGAAAAGGCGGGGCAGCGGGCCTGCAGCTCCTGGAGTTCAGGGAGACCCGGAAATCTCACCCTGCCCT
CTTCTTGTGTTGTGTTTGTCACAGCCTTGCCCCTCTTGCTCGCCTTGAAAATGGAAAAGATGCTCGCAGGCTGCT
TTCTGCTGATCCTCGGACAGATCGTCCTCCTCCCTGCCGAGGCCAGGGAGCGGTCACGTGGGAGGTCCATCTCTA
GGGGCAGACACGCTCGGACCCACCCGCAGACGGCCCTTCTGGAGAGTTCCTGTGAGAACAAGCGGGCAGACCTGG
TTTTCATCATTGACAGCTCTCGCAGTGTCAACACCCATGACTATGCAAAGGTCAAGGAGTTCATCGTGGACATCT
TGCAATTCTTGGACATTGGTCCTGATGTCACCCGAGTGGGCCTGCTCCAATATGGCAGCACTGTCAAGAATGAGT
TCTCCCTCAAGACCTTCAAGAGGAAGTCCGAGGTGGAGCGTGCTGTCAAGAGGATGCGGCATCTGTCCACGGGCA
CCATGACCGGGCTGGCCATCCAGTATGCCCTGAACATCGCATTCTCAGAAGCAGAGGGGGCCCGGCCCCTGAGGG
AGAATGTGCCACGGGTCATAATGATCGTGACAGATGGGAGACCTCAGGACTCCGTGGCCGAGGTGGCTGCTAAGG
CACGGGACACGGGCATCCTAATCTTTGCCATTGGTGTGGGCCAGGTAGACTTCAACACCTTGAAGTCCATTGGGA
GTGAGCCCCATGAGGACCATGTCTTCCTTGTGGCCAATTTCAGCCAGATTGAGACGCTGACCTCCGTGTTCCAGA
AGAAGTTGTGCACGGCCCACATGTGCAGCACCCTGGAGCATAACTGTGCCCACTTCTGCATCAACATCCCTGGCT
CATACGTCTGCAGGTGCAAACAAGGCTACATTCTCAACTCGGATCAGACGACTTGCAGAATCCAGGATCTGTGTG
CCATGGAGGACCACAACTGTGAGCAGCTCTGTGTGAATGTGCCGGGCTCCTTCGTCTGCCAGTGCTACAGTGGCT
ACGCCCTGGCTGAGGATGGGAAGAGGTGTGTGGCTGTGGACTACTGTGCCTCAGAAAACCACGGATGTGAACATG
AGTGTGTAAATGCTGATGGCTCCTACCTTTGCCAGTGCCATGAAGGATTTGCTCTTAACCCAGATGAAAAAACGT
GCACAAAGATAGACTACTGTGCCTCATCTAATCACGGATGTCAGCACGAGTGTGTTAACACAGATGATTCCTATT
CCTGCCACTGCCTGAAAGGCTTTACCCTGAATCCAGATAAGAAAACCTGCAGAAGGATCAACTACTGTGCACTGA
ACAAACCGGGCTGTGAGCATGAGTGCGTCAACATGGAGGAGAGCTACTACTGCCGCTGCCACCGTGGCTACACTC
TGGACCCCAATGGCAAAACCTGCAGCCGAGTGGACCACTGTGCACAGCAGGACCATGGCTGTGAGCAGCTGTGTC
TGAACACGGAGGATTCCTTCGTCTGCCAGTGCTCAGAAGGCTTCCTCATCAACGAGGACCTCAAGACCTGCTCCC
GGGTGGATTACTGCCTGCTGAGTGACCATGGTTGTGAATACTCCTGTGTCAACATGGACAGATCCTTTGCCTGTC
AGTGTCCTGAGGGACACGTGCTCCGCAGCGATGGGAAGACGTGTGCAAAATTGGACTCTTGTGCTCTGGGGGACC
ACGGTTGTGAACATTCGTGTGTAAGCAGTGAAGATTCGTTTGTGTGCCAGTGCTTTGAAGGTTATATACTCCGTG
AAGATGGAAAAACCTGCAGAAGGAAAGATGTCTGCCAAGCTATAGACCATGGCTGTGAACACATTTGTGTGAACA
GTGATGACTCATACACGTGCGAGTGCTTGGAGGGATTCCGGCTCGCTGAGGATGGGAAACGCTGCCGAAGGAAGG
ATGTCTGCAAATCAACCCACCATGGCTGCGAACACATTTGTGTTAATAATGGGAATTCCTACATCTGCAAATGCT
CAGAGGGATTTGTTCTAGCTGAGGACGGAAGACGGTGCAAGAAATGCACTGAAGGCCCAATTGACCTGGTCTTTG
TGATCGATGGATCCAAGAGTCTTGGAGAAGAGAATTTTGAGGTCGTGAAGCAGTTTGTCACTGGAATTATAGATT
CCTTGACAATTTCCCCCAAAGCCGCTCGAGTGGGGCTGCTCCAGTATTCCACACAGGTCCACACAGAGTTCACTC
TGAGAAACTTCAACTCAGCCAAAGACATGAAAAAAGCCGTGGCCCACATGAAATACATGGGAAAGGGCTCTATGA
CTGGGCTGGCCCTGAAACACATGTTTGAGAGAAGTTTTACCCAAGGAGAAGGGGCCAGGCCTTTTTCCACAAGGG
TGCCCAGAGCAGCCATTGTGTTCACCGACGGACGGGCTCAGGATGACGTCTCCGAGTGGGCCAGTAAAGCCAAGG
CCAATGGTATCACTATGTATGCTGTTGGGGTAGGAAAAGCCATTGAGGAGGAACTACAAGAGATTGCCTCTGAGC
CCACAAACAAGCATCTCTTCTATGCCGAAGACTTCAGCACAATGGATGAGATAAGTGAAAAACTCAAGAAAGGCA
TCTGTGAAGCTCTAGAAGACTCCGATGGAAGACAGGACTCTCCAGCAGGGGAACTGCCAAAAACGGTCCAACAGC
CAACAGAATCTGAGCCAGTCACCATAAATATCCAAGACCTACTTTCCTGTTCTAATTTTGCAGTGCAACACAGAT
ATCTGTTTGAAGAAGACAATCTTTTACGGTCTACACAAAAGCTTTCCCATTCAACAAAACCTTCAGGAAGCCCTT
TGGAAGAAAAACACGATCAATGCAAATGTGAAAACCTTATAATGTTCCAGAACCTTGCAAACGAAGAAGTAAGAA
AATTAACACAGCGCTTAGAAGAAATGACACAGAGAATGGAAGCCCTGGAAAATCGCCTGAGATACAGATGAAGAT
TAGAAATCGCGACACATTTGTAGTCATTGTATCACGGATTACAATGAACGCAGTGCAGAGCCCCAAAGCTCAGGC
TATTGTTAAATCAATAATGTTGTGAAGTAAAACAATCAGTACTGAGAAACCTGGTTTGCCACAGAACAAAGACAA
GAAGTATACACTAACTTGTATAAATTTATCTAGGAAAAAAATCCTTCAGAATTCTAAGATGAATTTACCAGGTGA
GAATGAATAAGCTATGCAAGGTATTTTGTAATATACTGTGGACACAACTTGCTTCTGCCTCATCCTGCCTTAGTG
TGCAATCTCATTTGACTATACGATAAAGTTTGCACAGTCTTACTTCTGTAGAACACTGGCCATAGGAAATGCTGT
TTTTTTGTACTGGACTTTACCTTGATATATGTATATGGATGTATGCATAAAATCATAGGACATATGTACTTGTGG
AACAAGTTGGATTTTTTATACAATATTAAAAATTCACCACTTCAGAG
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FIGURE 8

MEKMLAGCFLLILGQIVLLPAEARERSRGRSISRGRHARTHPQTALLESSCENKRADLVFIIDSSRSVNTHDYAK
VKEFIVDILQFLDIGPDVTRVGLLQYGSTVKNEFSLKTFKRKSEVERAVKRMRHLSTGTMTGLAIQYALNIAFSE
AEGARPLRENVPRVIMIVTDGRPQDSVAEVAAKARDTGILIFAIGVGQVDFNTLKSIGSEPHEDHVFLVANFSQI
ETLTSVFQKKLCTAHMCSTLEHNCAHFCINIPGSYVCRCKQGYILNSDQTTCRIQDLCAMEDHNCEQLCVNVPGS
FVCQCYSGYALAEDGKRCVAVDYCASENHGCEHECVNADGSYLCQCHEGFALNPDEKTCTKIDYCASSNHGCQHE
CVNTDDSYSCHCLKGFTLNPDKKTCRRINYCALNKPGCEHECVNMEESYYCRCHRGYTLDPNGKTCSRVDHCAQQ
DHGCEQLCLNTEDSFVCQCSEGFLINEDLKTCSRVDYCLLSDHGCEYSCVNMDRSFACQCPEGHVLRSDGKTCAK
LDSCALGDHGCEHSCVSSEDSFVCQCFEGYILREDGKTCRRKDVCQAIDHGCEHICVNSDDSYTCECLEGFRLAE
DGKRCRRKDVCKSTHHGCEHICVNNGNSYICKCSEGFVLAEDGRRCKKCTEGPIDLVFVIDGSKSLGEENFEVVK
QFVTGIIDSLTISPKAARVGLLQYSTQVHTEFTLRNFNSAKDMKKAVAHMKYMGKGSMTGLALKHMFERSFTQGE
GARPFSTRVPRAAIVFTDGRAQDDVSEWASKAKANGITMYAVGVGKAIEEELQEIASEPTNKHLFYAEDFSTMDE
ISEKLKKGICEALEDSDGRQDSPAGELPKTVQQPTESEPVTINIQDLLSCSNFAVQHRYLFEEDNLLRSTQKLSH
STKPSGSPLEEKHDQCKCENLIMFQNLANEEVRKLTQRLEEMTQRMEALENRLRYR

FIGURE 9

CGGACGCGTGGGGCGGCGAGAGCAGCTGCAGTTCGCATCTCAGGCAGTACCTAGAGGAGCTGCCGGTGCCTCCTC
AGAACATCTCCTGATCGCTACCCAGGACCAGGCACCAAGGACAGGGAGTCCCAGGCGCACACCCCCCATTCTGGG
TCCCCCAGGCCCAGACCCCCACTCTGCCACAGGTTGCATCTTGACCTGGTCCTCCTGCAGAAGTGGCCCCTGTGG
TCCTGCTCTGAGACTCGTCCCTGGGCGCCCCTGCAGCCCCTTTCTATGACTCCATCTGGATTTGGCTGGCTGTGG
GGACGCGGTCCGAGGGGCGGCCTGGCTCTCAGCGTGGTGGCAGCCAGCTCTCTGGCCACCATGGCAAATGCTGAG
ATCTGAGGGGACAAGGCTCTACAGCCTCAGCCAGGGGCACTCAGCTGTTGCAGGGTGTG**ATG**GAGAACAAAGCTA
TGTACCTACACACCGTCAGCGACTGTGACACCAGCTCCATCTGTGAGGATTCCTTTGATGGCAGGAGCCTGTCCA
AGCTGAACCTGTGTGA GGATGGTCCATGTCACAAACGGCGGGCAAGCATCTGCTGTACCCAGCTGGGGTCCCTGT
CGGCCCTGAAGCATGCTGTCCTGGGGCTCTACCTGCTGGTCTTCCTGATTCTTGTGGGCATCTTCATCTTAGCAG
GGCCACCGGGACCCAAAGGTGATCAGGGGGGATGAAGGAAAGGAAGGCAGGCCTGGCATCCCTGGATTGCCTGGAC
TTCGAGGTCTGCCCGGGGAGAGAGGTACCCCAGGATTGCCCGGGCCCAAGGGCGATGATGGGAAGCTGGGGGCCA
CAGGACCAATGGGCATGCGTGGGTTCAAAGGTGACCGAGGCCCAAAAGGAGAGAAAGGAGAGAAAGGAGACAGAG
CTGGGGATGCCAGTGGCGTGGAGGCCCCGATGATGATCCGCCTGGTGAATGGCTCAGGTCCGCACGAGGGCCGCG
TGGAAGTGTACCACGACCGGCGCTGGGGCACCGTGTGTGACGACGGCTGGGACAAGAAGGACGGAGACGTGGTGT
GCCGCATGCTCGGCTTCCGCGGTGTGGAGGAGGTGTACCGCACAGCTCGATTCGGGCAAGGCAGTGGGAGGATCT
GGATGGATGACGTTGCCTGCAAGGGCACAGAGGAAACCATCTTCCGCTGCAGCTTCTCCAAATGGGGGGTGACAA
ACTGTGGACATGCCGAAGATGCCAGCGTGACATGCAACAGCAC**TGA**AGTGGGCAGAGCCCAAGTTCGGGGTCC
TGCACAGAGCACCCTTGCTGCATCCCTGGGGTGGGGCACAGCTCGGGGCCACCCTGACCATGCCTCGACCACACC
CCGTCCAGCATTCTCAGTCCTCACACCTGCATCCCAGGACCGTGGGGGCCGGTCGTCATTTCCCTCTTGAACATG
TGCTCCGAAGTATAACTCTGGGACCTACTGCCCGTCTCTCTCTTCCACCAGGTTCCTGCATGAGGAGCCCTGATC
AACTGGATCACCACTTTGCCCAGCCTCTGAACACCATGCACCAGGCCTCAATATCCCAGTTCCCTTTGGCCTTTT
AGTTACAGGTGAATGCTGAGAATGTGTCAGAGACAAGTGCAGCAGCAGCGATGGTTGGTAGTATAGATCATTTAC
TCTTCAGACAATTCCCAAACCTCCATTAGTCCAAGAGTTTCTACATCTTCCTCCCCAGCAAGAGGCAACGTCAAG
TGATGAATTTCCCCCCTTTACTCTGCCTCTGCTCCCCATTTGCTAGTTTGAGGAAGTGACATAGAGGAGAAGCCA
GCTGTAGGGGCAAGAGGGAAATGCAAGTCACCTGCAGGAATCCAGCTAGATTTGGAGAAGGGAATGAAACTAACA
TTGAATGACTACCATGGCACGCTAAATAGTATCTTGGGTGCCAAATTCATGTATCCACTTAGCTGCATTGGTCCA
GGGCATGTCAGTCTGGATACAGCCTTACCTTCAGGTAGCACTTAACTGGTCCATTCACCTAGACTGCAAGTAAGA
AGACAAAATGACTGAGACCGTGTGCCCACCTGAACTTATTGTCTTTACTTGGCCTGAGCTAAAAGCTTGGGTGCA
GGACCTGTGTAACTAGAAAGTTGCCTACTTCAGAACCTCCAGGGCGTGAGTGCAAGGTCAAACATGACTGGCTTC
CAGGCCGACCATCAATGTAGGAGGAGAGCTGATGTGGAGGGTGACATGGGGGCTGCCCATGTTAAACCTGAGTCC
AGTGCTCTGGCATTGGGCAGTCACGGTTAAAGCCAAGTCATGTGTGTCTCAGCTGTTTGGAGGTGATGATTTTGC
ATCTTCCAAGCCTCTTCAGGTGTGAATCTGTGGTCAGGAAAACACAAGTCCTAATGGAACCCTTAGGGGGGAAGG
AAATGAAGATTCCCTATAACCTCTGGGGGTGGGGAGTAGGAATAAGGGGCCTTGGGCCTCCATAAATCTGCAATC
TGCACCCTCCTCCTAGAGACAGGGAGATCGTGTTCTGCTTTTTACATGAGGAGCAGAACTGGGCCATACACGTGT
TCAAGAACTAGGGGAGCTACCTGGTAGCAAGTGAGTGCAGACCCACCTCACCTTGGGGGAATCTCAAACTCATAG
GCCTCAGATACACGATCACCTGTCATATCAGGTGAGCACTGGCCTGCTTGGGGAGAGACCTGGGCCCCTCCAGGT
GTAGGAACAGCAACACTCCTGGCTGACAACTAAGCCAATATGGCCCTAGGTCATTCTTGCTTCCAATATGCTTGC
CACTCCTTAAATGTCCTAATGATGAGAAACTCTCTTTCTGACCAATTGCTATGTTTACATAACACGCATGTACTC
ATGCATCCCTTGCCAGAGCCCATATATGTATGCATATATAAACATAGCACTTTTTACTACATAGCTCAGCACATT
GCAAGGTTTGCATTTAAGTT

FIGURE 10

MENKAMYLHTVSDCDTSSICEDSFDGRSLSKLNLCEDGPCHKRRASICCTQLGSLSALKHAVLGLYLLVFLILVG
.IFILAGPPGPKGDQGDEGKEGRPGIPGLPGLRGLPGERGTPGLPGPKGDDGKLGATGPMGMRGFKGDRGPKGEKG
EKGDRAGDASGVEAPMMIRLVNGSGPHEGRVEVYHDRRWGTVCDDGWDKKDGDVVCRMLGFRGVEEVYRTARFGQ
GTGRIWMDDVACKGTEETIFRCSFSKWGVTNCGHAEDASVTCNRH

FIGURE 11

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AAGCAACCAAACTGCAAGCTTTGGGAGTTGTTCGCTGTCCCTGCCCTGCTCTGCTAGGGAGAGAACGCCAGAGGG
AGGCGGCTGGCCCGGCGGCAGGCTCTCAGAACCGCTACCGGCGATGCTACTGCTGTGGGTGTCGGTGGTCGCAGC
CTTGGCGCTGGCGGTACTGGCCCCCGGAGCAGGGGAGCAGAGGCGGAGAGCAGCCAAAGCGCCCAATGTGGTGCT
GGTCGTGAGCGACTCCTTCGATGGAAGGTTAACATTTCATCCAGGAAGTCAGGTAGTGAAACTTCCTTTTATCAA
CTTTATGAAGACACGTGGGACTTCCTTTCTGAATGCCTACACAAACTCTCCAATTTGTTGCCCATCACGCGCAGC
AATGTGGAGTGGCCTCTTCACTCACTTAACAGAATCTTGGAATAATTTTAAGGGTCTAGATCCAAATTATACAAC
ATGGATGGATGTCATGGAGAGGCATGGCTACCGAACACAGAAATTTGGGAAACTGGACTATACTTCAGGACATCA
CTCCATTAGTAATCGTGTGGAAGCGTGGACAAGAGATGTTGCTTTCTTACTCAGACAAGAAGGCAGGCCCATGGT
TAATCTTATCCGTAACAGGACTAAAGTCAGAGTGATGGAAAGGGATTGGCAGAATACAGACAAAGCAGTAAACTG
GTTAAGAAAGGAAGCAATTAATTACACTGAACCATTTGTTATTTACTTGGGATTAAATTTACCACACCCTTACCC
TTCACCATCTTCTGGAGAAAATTTTGGATCTTCAACATTTCACACATCTCTTTATTGGCTTGAAAAAGTGTCTCA
TGATGCCATCAAAATCCCAAAGTGGTCACCTTTGTCAGAAATGCACCCTGTAGATTATTACTCTTCTTATACAAA
AAACTGCACTGGAAGATTTACAAAAAAAGAAATTAAGAATATTAGAGCATTTTATTATGCTATGTGTGCTGAGAC
AGATGCCATGCTTGGTGAAATTATTTTGGCCCTTCATCAATTAGATCTTCTTCAGAAAACTATTGTCATATACTC
CTCAGACCATGGAGAGCTGGCCATGGAACATCGACAGTTTTATAAAATGAGCATGTACGAGGCTAGTGCACATGT
TCCGCTTTTGATGATGGGACCAGGAATTAAAGCCGGCCTACAAGTATCAAATGTGGTTTCTCTTGTGGATATTTA
CCCTACCATGCTTGATATTGCTGGAATTCCTCTGCCTCAGAACCTGAGTGGATACTCTTTGTTGCCGTTATCATC
AGAAACATTTAAGAATGAACATAAAGTCAAAAACCTGCATCCACCCTGGATTCTGAGTGAATTCCATGGATGTAA
TGTGAATGCCTCCACCTACATGCTTCGAACTAACCACTGGAAATATATAGCCTATTCGGATGGTGCATCAATATT
GCCTCAACTCTTTGATCTTTCCTCGGATCCAGATGAATTAACAAATGTTGCTGTAAAATTTCCAGAAATTACTTA
TTCTTTGGATCAGAAGCTTCATTCCATTATAAACTACCCTAAAGTTTCTGCTTCTGTCCACCAGTATAATAAAGA
GCAGTTTATCAAGTGGAAACAAAGTATAGGACAGAATTATTCAAACGTTATAGCAAATCTTAGGTGGCACCAAGA
CTGGCAGAAGGAACCAAGGAAGTATGAAAATGCAATTGATCAGTGGCTTAAAACCCATATGAATCCAAGAGCAGT
TTGAACAAAAAGTTTAAAAATAGTGTTCTAGAGATACATATAAATATATTACAAGATCATAATTATGTATTTTAA
ATGAAACAGTTTTAATAATTACCAAGTTTTGGCCGGGCACAGTGGCTCACACCTGTAATCCCAGGACTTTGGGAG
GCTGAGGAAAGCAGATCACAAGGTCAAGAGATTGAGACCATCCTGGCCAACATGGTGAAACCCTGTCTCTACTAA
AAATACAAAAATTAGCTGGGCGCGGTGGTGCACACCTATAGTCTCAGCTACTCAGAGGCTGAGGCAGGAGGATCG
CTTGAACCCGGGAGGCAGCAGTTGCAGTGAGCTGAGATTGCGCCACTGTACTCCAGCCTGGCAACAGAGTGAGAC
TGTGTCGCAAAAAAATAAAAATAAAATAATAATAATTACCAATTTTTCATTATTTTGTAAGAATGTAGTGTATTT
TAAGATAAAATGCCAATGATTATAAAATCACATATTTTCAAAAATGGTTATTATTTAGGCCTTTGTACAATTTCT
AACAATTTAGTGGAAGTATCAAAAGGATTGAAGCAAATACTGTAACAGTTATGTTCCTTTAAATAATAGAGAATA
TAAAATATTGTAATAATATGTATCATAAAATAGTTGTATGTGAGCATTTGATGGTGAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
A
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FIGURE 12

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MLLLWVSVVAALALAVLAPGAGEQRRRAAKAPNVVLVVSDSFDGRLTFHPGSQVVKLPFINFMKTRGTSFLNAYT
NSPICCPSRAAMWSGLFTHLTESWNNFKGLDPNYTTWMDVMERHGYRTQKFGKLDYTSGHHSISNRVEAWTRDVA
FLLRQEGRPMVNLIRNRTKVRVMERDWQNTDKAVNWLRKEAINYTEPFVIYLGLNLPHPYPSPSSGENFGSSTFH
TSLYWLEKVSHDAIKIPKWSPLSEMHPVDYYSSYTKNCTGRFTKKEIKNIRAFYYAMCAETDAMLGEIILALHQL
DLLQKTIVIYSSDHGELAMEHRQFYKMSMYEASAHVPLLMMGPGIKAGLQVSNVVSLVDIYPTMLDIAGIPLPQN
LSGYSLLPLSSETFKNEHKVKNLHPPWILSEFHGCNVNASTYMLRTNHWKYIAYSDGASILPQLFDLSSDPDELT
NVAVKFPEITYSLDQKLHSIINYPKVSASVHQYNKEQFIKWKQSIGQNYSNVIANLRWHQDWQKEPRKYENAIDQ
WLKTHMNPRAV
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FIGURE 13

GTAAGAACCATCACAAGACAAAATGGTTCGTGCCTTGGGGACCCAATCATTGTGACAAGATCCGAGACATTGAAG
AGGCAATTCCAAGGGAAATTGAAGCCAATGACATCGTGTTTTCTGTTCACATTCCCCTCCCCCAC**ATG**GAGATGA
GTCCTTGGTTCCAATTCATGCTGTTTATCCTGCAGCTGGACATTGCCTTCAAGCTAAACAACCAAATCAGAGAAA
ATGCAGAAGTCTCCATGGACGTTTCCCTGGCTTACCGTGATGACGCATTTGCTGAGTGGACTGAAATGGCCCATG
AAAGAGTACCACGGAAACTCAAATGCACCTTCACATCTCCCAAGACTCCAGAGCATGAGGGCCGTTACTATGAAT
GTGATGTCCTTCCTTTCATGGAAATTGGGTCTGTGGCCCATAAGTTTTACCTTTTAAACATCCGGCTGCCTGTGA
ATGAGAAGAAGAAATCAATGTGGGAATTGGGGAGATAAAGGATATCCGGTTGGTGGGGATCCACCAAAATGGAG
GCTTCACCAAGGTGTGGTTTGCCATGAAGACCTTCCTTACGCCCAGCATCTTCATCATTATGGTGTGGTATTGGA
GGAGGATCACCATGATGTCCCGACCCCCAGTGCTTCTGGAAAAAGTCATCTTTGCCCTTGGGATTTCCATGACCT
TTATCAATATCCCAGTGGAATGGTTTTCCATCGGGTTTGACTGGACCTGGATGCTGCTGTTTGGTGACATCCGAC
AGGGCATCTTCTATGCGATGCTTCTGTCCTTCTGGATCATCTTCTGTGGCGAGCACATGATGGATCAGCACGAGC
GGAACCACATCGCAGGGTATTGGAAGCAAGTCGGACCCATTGCCGTTGGCTCCTTCTGCCTCTTCATATTTGACA
TGTGTGAGAGAGGGGTACAACTCACGAATCCCTTCTACAGTATCTGGACTACAGACATTGGAACAGAGCTGGCCA
TGGCCTTCATCATCGTGGCTGGAATCTGCCTCTGCCTCTACTTCCTGTTTCTATGCTTCATGGTATTTCAGGTGT
TTCGGAACATCAGTGGGAAGCAGTCCAGCCTGCCAGCTATGAGCAAAGTCCGGCGGCTACACTATGAGGGGCTAA
TTTTTAGGTTCAAGTTCCTCATGCTTATCACCTTGGCCTGCGCTGCCATGACTGTCATCTTCTTCATCGTTAGTC
AGGTAACGGAAGGCCATTGGAAATGGGGCGGCGTCACAGTCCAAGTGAACAGTGCCTTTTTCACAGGCATCTATG
GGATGTGGAATCTGTATGTCTTTGCTCTGATGTTCTTGTATGCACCATCCCATAAAAACTATGGAGAAGACCAGT
CCAATGGCGATCTGGGTGTCCATAGTGGGGAAGAACTCCAGCTCACCACCACTATCACCCATGTGGACGGACCCA
CTGAGATCTACAAGTTGACCCGCAAGGAGGCCCAGGAG**TAG**GAGGCTGCAGCGCCCGGCTGGGACGGTCTCTCCA
TACCCCAGCCCCTCTAACTAGAGTGGGGGAGCATGCCAGAGAGAGCTCAATGTACAAATGAATGCCTCATGGCTCT
TAGCTGTGGTTTCTTGGACCAGCGGCATGGACATTTGTCAGTTTGCCTTCTGACGGTAGCTTTTGGAGGAAGATT
CCTGCAGCCACTAATGCATTGTGTATGATAACAAAAACTCTGGTATGACACATTTTCTGTGATCATTGTTAATTA
GTGACATAGTAACATCTGTAGCAGCTGGTTAGTAAACCTCATGTGGGGGTGGGGTGGGGGTGTATTCCTTGGGGG
ATGGTTTGGGCCGAATGGGGAGTGGAATATTTGACATTTTTCCTGTTTTAAATTCTAGGATAGATTTTAACATCC
TTTGCGGTCCCAGTCCAAGGTAGGCTGGTGTCATAGTCTTCTCACTCCTAATCCATGACCACTGTTTTTTTCCTA
TTTATATCACCAGGTAGCCTACTGAGTTAATATTTAAGTTGTCAATAGATAAGTGTCCCTGTTTTGTGGCATAAT
ATAACTGAATTTCATGAGAAGATTTATTCCACCAGGGGTATTTCAGCTTTGAAACCAAATCTGTGTATCTAATAC
TAACCAATCTGTTGGATGTGGATTTTAAAAAATGTTTGCTAAACTACCCAAGTAAGATTTACTGTATTAAATGGC
CTTCGGGTCTGAAAAGCTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 14

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MEMSPWFQFMLFILQLDIAFKLNNQIRENAEVSMDVSLAYRDDAFAEWTEMAHERVPRKLKCTFTSPKTPEHEGR
YYECDVLPFMEIGSVAHKFYLLNIRLPVNEKKKINVGIGEIKDIRLVGIHQNGGFTKVWFAMKTFLTPSIFIIMV
WYWRRITMMSRPPVLLEKVIFALGISMTFINIPVEWFSIGFDWTWMLLFGDIRQGIFYAMLLSFWIIFCGEHMMD
QHERNHIAGYWKQVGPIAVGSFCLFIFDMCERGVQLTNPFYSIWTTDIGTELAMAFIIVAGICLCLYFLFLCFMV
FQVFRNISGKQSSLPAMSKVRRLHYEGLIFRFKFLMLITLACAAMTVIFFIVSQVTEGHWKWGGVTVQVNSAFFT
GIYGMWNLYVFALMFLYAPSHKNYGEDQSNGDLGVHSGEELQLTTTITHVDGPTEIYKLTRKEAQE
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FIGURE 15

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GGTAACTGCAGTAAGTCCCGCTTGGCCCTGGAGTCCACGCGGATTTTCGAAGCTGGGGCTGGCAAGAGGCCGCTG
GACACCACGCTCCAGTCGTCAGCCCACTTCCTAGCTGAACAGCGCGAGGCGGCGGCAGCGAGCCGGGTCCCACCA
TGGCCGCGAATTATTCCAGTACCAGTACCCGGAGAGAACATGTCAAAGTTAAAACCAGCTCCCAGCCAGGCTTCC
TGGAACGGCTGAGCGAGACCTCGGGTGGGATGTTTGTGGGGCTCATGGCCTTCCTGCTCTCCTTCTACCTAATTT
TCACCAATGAGGGCCGCGCATTGAAGACGGCAACCTCATTGGCTGAGGGGCTCTCGCTTGTGGTGTCTCCCGACA
GCATCCACAGTGTGGCTCCGGAGAATGAAGGAAGGCTGGTGCACATCATTGGCGCCTTACGGACATCCAAGCTTT
TGTCTGATCCAAACTATGGGGTCCATCTTCCGGCTGTGAAACTGCGGAGGCACGTGGAGATGTACCAATGGGTAG
AAACTGAGGAGTCCAGGGAGTACACCGAGGATGGGCAGGTGAAGAAGGAGACGAGGTATTCCTACAACACTGAAT
GGAGGTCAGAAATCATCAACAGCAAAAACTTCGACCGAGAGATTGGCCACAAAAACCCCAGTGCCATGGCAGTGG
AGTCATTCATGGCAACAGCCCCCTTTGTCCAAATTGGCAGGTTTTTCCTCTCGTCAGGCCTCATCGACAAAGTCG
ACAACTTCAAGTCCCTGAGCCTATCCAAGCTGGAGGACCCTCATGTGGACATCATTCGCCGTGGAGACTTTTTCT
ACCACAGCGAAAATCCCAAGTATCCAGAGGTGGGAGACTTGCGTGTCTCCTTTTCCTATGCTGGACTGAGCGGCG
ATGACCCTGACCTGGGCCCAGCTCACGTGGTCACTGTGATTGCCCGGCAGCGGGGTGACCAGCTAGTCCCATTCT
CCACCAAGTCTGGGGATACCTTACTGCTCCTGCACCACGGGGACTTCTCAGCAGAGGAGGTGTTTCATAGAGAAC
TAAGGAGCAACTCCATGAAGACCTGGGGCCTGCGGGCAGCTGGCTGGATGGCCATGTTCATGGGCCTCAACCTTA
TGACACGGATCCTCTACACCTTGGTGGACTGGTTTCCTGTTTTCCGAGACCTGGTCAACATTGGCCTGAAAGCCT
TTGCCTTCTGTGTGGCCACCTCGCTGACCCTGCTGACCGTGGCGGCTGGCTGGCTCTTCTACCGACCCCTGTGGG
CCCTCCTCATTGCCGGCCTGGCCCTTGTGCCCATCCTTGTTGCTCGGACACGGGTGCCAGCCAAAAAGTTGGAGT
GAAAAGACCCTGGCACCCGCCCGACACCTGCGTGAGCCCTAGGATCCAGGTCCTCTCTCACCTCTGACCCAGCTC
CATGCCAGAGCAGGAGCCCCGGTCAATTTTGGACTCTGCACTCCCTCTCCTCTTCAGGGGCCAGACTTGGCAGCA
TGTGCACCAGGTTGGTGTTCACCAGCTCATGTCTTCCCCACATCTCTTCTTGCCAGTAAGCAGCTTTGGTGGGCA
GCAGCAGCTCATGAATGGCAAGCTGACAGCTTCTCCTGCTGTTTCCTTCCTCTCTTGGACTGAGTGGGTACGGCC
AGCCACTCAGCCCATTGGCAGCTGACAACGCAGACACGCTCTACGGAGGCCTGCTGATAAAGGGCTCAGCCTTGC
CGTGTGCTGCTTCTCATCACTGCACACAAGTGCCATGCTTTGCCACCACCACCAAGCACATCTGTGATCCTGAAG
GGCGGCCGTTAGTCATTACTGCTGAGTCCTGGGTCACCAGCAGACACACTGGGCATGGACCCCTCAAAGCAGGCA
CACCCAAAACACAAGTCTGTGGCTAGAACCTGATGTGGTGTTTAAAAGAGAAGAAACACTGAAGATGTCCTGAGG
AGAAAAGCTGGACATATACTGGGCTTCACACTTATCTTATGGCTTGGCAGAATCTTTGTAGTGTGTGGGATCTCT
GAAGGCCCTATTTAAGTTTTTCTTCGTTACTTTGCTGCTTCATGTGTACTTTCCTACCCCAAGAGGAAGTTTTCT
GAAATAAGATTTAAAAACAAAACAAAAAAAACACTTAATATTTCAGACTGTTACAGGAAACACCCTTTAGTCTGT
CAGTTGAATTCAGAGCACTGAAAGGTGTTAAATTGGGGTATGTGGTTTGATTGATAAAAAGTTACCTCTCAGTAT
TTTGTGTCACTGAGAAGCTTTACAATGGATGCTTTTGAAACAAGTATCAGCAAAAGGATTTGTTTTCACTCTGGG
AGGAGAGGGTGGAGAAAGCACTTGCTTTCATCCTCTGGCATCGGAAACTCCCCTATGCACTTGAAGATGGTTTAA
AAGATTAAAGAAACGATTAAGAGAAAAGGTTGGAAGCTTTATACTAAATGGGCTCCTTCATGGTGACGCCCCGTC
AACCACAATCAAGAACTGAGGCCTGAGGCTGGTTGTACAATGCCCACGCCTGCCTGGCTGCTTTCACCTGGGAGT
GCTTTCGATGTGGGCACCTGGGCTTCCTAGGGCTGCTTCTGAGTGGTTCTTTCACGTGTTGTGTCCATAGCTTTA
GTCTTCCTAAATAAGATCCACCCACACCTAAGTCACAGAATTTCTAAGTTCCCCAACTACTCTCACACCCTTTTA
AAGATAAAGTATGTTGTAACCAGGATGTCTTAAATGATTCTTTGTGTACCTTTTCTGTCATATTCAGAAACCGTT
TTGTGCCTGCTGGGAGTAATTCCTTTAGCAATTAAGTATTTGGTAGCTGAATAAGGGGTCAGAACTTCTGAAACC
AGAGATCTGTAATCATCTCTATTGGCCTGGGGTGCCTGTGCTATAAATGAGTTTCTTCACATGAAAAACACAGCC
AGCCCAAGATGACTTATCTGGGTTTAGGATTCAATAGTATTCACTAACTGCTTATTACATGAGCAATTTCATCAA
ATCTCCAAACTCTTAAAGGATGCTTTCGGAAAACACGCTGTATACCTAGATGATGACTAAATGCAAATCCTTGG
GCTTTGGTTTTTTTCTAGTAAGGATTTTAAATAACTGCCGACTTCAAAAGTGTTCTTAAAAACGAAAGATAATGTT
AAGAAAAATTTGAAAGCTTTGGAAAACCAAATTTGTAATATCATTGTATTTTTTATTAAAAGTTTTGTAATAAAT
TTCTAAATTATAAAAAAAAAAAAAAAAAA
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FIGURE 16

MAANYSSTSTRREHVKVKTSSQPGFLERLSETSGGMFVGLMAFLLSFYLIFTNEGRALKTATSLAEGLSLVVSPD
SIHSVAPENEGRLVHIIGALRTSKLLSDPNYGVHLPAVKLRRHVEMYQWVETEESREYTEDGQVKKETRYSYNTE
WRSEIINSKNFDREIGHKNPSAMAVESFMATAPFVQIGRFFLSSGLIDKVDNFKSLSLSKLEDPHVDIIRRGDFF
YHSENPKYPEVGDLRVSFSYAGLSGDDPDLGPAHVVTVIARQRGDQLVPFSTKSGDTLLLLHHGDFSAEEVFHRE
LRSNSMKTWGLRAAGWMAMFMGLNLMTRILYTLVDWFPVFRDLVNIGLKAFAFCVATSLTLLTVAAGWLFYRPLW
ALLIAGLALVPILVARTRVPAKKLE

FIGURE 17

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GTCTAAACGGGAACAGCCCTGGCTGAGGGAGCTGCAGCGCAGCAGAGTATCTGACGGCGCCAGGTTGCGTAGGTG
CGGCACGAGGAGTTTTCCCGGCAGCGAGGAGGTCCTGAGCAGCATGGCCCGGAGGAGCGCCTTCCCTGCCGCCGC
GCTCTGGCTCTGGAGCATCCTCCTGTGCCTGCTGGCACTGCGGGCGGAGGCCGGGCCGCCGCAGGAGGAGAGCCT
GTACCTATGGATCGATGCTCACCAGGCAAGAGTACTCATAGGATTTGAAGAAGATATCCTGATTGTTTCAGAGGG
GAAAATGGCACCTTTTACACATGATTTCAGAAAAGCGCAACAGAGAATGCCAGCTATTCCTGTCAATATCCATTC
CATGAATTTTACCTGGCAAGCTGCAGGGCAGGCAGAATACTTCTATGAATTCCTGTCCTTGCGCTCCCTGGATAA
AGGCATCATGGCAGATCCAACCGTCAATGTCCCTCTGCTGGGAACAGTGCCTCACAAGGCATCAGTTGTTCAAGT
TGGTTTCCCATGTCTTGGAAAACAGGATGGGGTGGCAGCATTTGAAGTGGATGTGATTGTTATGAATTCTGAAGG
CAACACCATTCTCCAAACACCTCAAAATGCTATCTTCTTTAAAACATGTCTACAAGCTGAGTGCCCAGGCGGGTG
CCGAAATGGAGGCTTTTGTAATGAAAGACGCATCTGCGAGTGTCCTGATGGGTTCCACGGACCTCACTGTGAGAA
AGCCCTTTGTACCCCACGATGTATGAATGGTGGACTTTGTGTGACTCCTGGTTTCTGCATCTGCCCACCTGGATT
CTATGGAGTGAACTGTGACAAAGCAAACTGCTCAACCACCTGCTTTAATGGAGGGACCTGTTTCTACCCTGGAAA
ATGTATTTGCCCTCCAGGACTAGAGGGAGAGCAGTGTGAAATCAGCAAATGCCCACAACCCTGTCGAAATGGAGG
TAAATGCATTGGTAAAAGCAAATGTAAGTGTTCCAAAGGTTACCAGGGAGACCTCTGTTCAAAGCCTGTCTGCGA
GCCTGGCTGTGGTGCACATGGAACCTGCCATGAACCCAACAAATGCCAATGTCAAGAAGGTTGGCATGGAAGACA
CTGCAATAAAAGGTACGAAGCCAGCCTCATACATGCCCTGAGGCCAGCAGGCGCCCAGCTCAGGCAGCACACGCC
TTCACTTAAAAAGGCCGAGGAGCGGCGGGATCCACCTGAATCCAATTACATCTGGTGAACTCCGACATCTGAAAC
GTTTTAAGTTACACCAAGTTCATAGCCTTTGTTAACCTTTCATGTGTTGAATGTTCAAATAATGTTCATTACACT
TAAGAATACTGGCCTGAATTTTATTAGCTTCATTATAAATCACTGAGCTGATATTTACTCTTCCTTTTAAGTTTT
CTAAGTACGTCTGTAGCATGATGGTATAGATTTTCTTGTTTCAGTGCTTTGGGACAGATTTTATATTATGTCAAT
TGATCAGGTTAAAATTTTCAGTGTGTAGTTGGCAGATATTTTCAAAATTACAATGCATTTATGGTGTCTGGGGGC
AGGGGAACATCAGAAAGGTTAAATTGGGCAAAAATGCGTAAGTCACAAGAATTTGGATGGTGCAGTTAATGTTGA
AGTTACAGCATTTCAGATTTTATTGTCAGATATTTAGATGTTTGTTACATTTTTAAAAATTGCTCTTAATTTTTA
AACTCTCAATACAATATATTTTGACCTTACCATTATTCCAGAGATTCAGTATTAAAAAAAAAAAAAAATTACACTG
TGGTAGTGGCATTTAAACAATATAATATATTCTAAACACAATGAAATAGGGAATATAATGTATGAACTTTTTGCA
TTGGCTTGAAGCAATATAATATATTGTAAACAAACACAGCTCTTACCTAATAAACATTTTATACTGTTTGTATG
TATAAAATAAAGGTGCTGCTTTAGTTTTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 18

MARRSAFPAAALWLWSILLCLLALRAEAGPPQEESLYLWIDAHQARVLIGFEEDILIVSEGKMAPFTHDFRKAQQ
RMPAIPVNIHSMNFTWQAAGQAEYFYEFLSLRSLDKGIMADPTVNVPLLGTVPHKASVVQVGFPCLGKQDGVAAF
EVDVIVMNSEGNTILQTPQNAIFFKTCLQAECPGGCRNGGFCNERRICECPDGFHGPHCEKALCTPRCMNGGLCV
TPGFCICPPGFYGVNCDKANCSTTCFNGGTCFYPGKCICPPGLEGEQCEISKCPQPCRNGGKCIGKSKCKCSKGY
QGDLCSKPVCEPGCGAHGTCHEPNKCQCQEGWHGRHCNKRYEASLIHALRPAGAQLRQHTPSLKKAEERRDPPES
NYIW

FIGURE 19

CTGACTGATATTTGAAGAAGTGTTTTCATCTATCCAAGAAAAATATGATGTCTCCATCCCAAGCCTCACTCTTAT
TCTTAAATGTATGTATTTTTATTTGTGGAGAAGCTGTACAAGGTAACTGTGTACATCATTCTACGGACTCTTCAG
TAGTTAACATTGTAGAAGATGGATCTAATGCAAAAGATGAAAGTAAAAGTAATGATACTGTTTGTAAGGAAGACT
GTGAGGAATCATGTGATGTTAAAACTAAAATTACACGAGAAGAAAAACATTTCATGTGTAGAAATTTGCAAAATT
CTATTGTTTCCTACACAAGAAGTACCAAAAAACTACTAAGGAATATGATGGATGAGCAACAAGCTTCCTTGGATT
ATTTATCTAATCAGGTTAACGAGCTCATGAATAGAGTTCTCCTTTTGACTACAGAAGTTTTTAGAAAACAGCTGG
ATCCTTTTCCTCACAGACCTGTTCAGTCACATGGTTTAGATTGCACTGATATTAAGGATACCATTGGCTCTGTCA
CCAAAACACCGAGTGGTTTATACATAATTCACCCAGAAGGATCTAGCTACCCATTTGAGGTAATGTGTGACATGG
ATTACAGAGGAGGTGGATGGACTGTGATACAGAAAAGAATTGATGGGATAATTGATTTCCAGAGGTTGTGGTGTG
ATTATCTGGATGGATTTGGAGATCTTCTAGGAGAATTTTGGCTAGGACTGAAAAAGATTTTTTATATAGTAAATC
AGAAAAATACCAGTTTTATGCTGTATGTGGCTTTGGAATCTGAAGATGACACTCTTGCTTATGCATCATATGATA
AATTTTTGGCTAGAGGATGAAACGAGATTTTTTAAAATGCACTTAGGACGGTATTCAGGAAATGCTGGTGATGCAT
TCCGGGGTCTCAAAAAAGAAGATAATCAAAATGCAATGCCTTTTAGCACATCAGATGTTGATAATGATGGGTGTC
GCCCTGCATGCCTGGTCAATGGTCAGTCTGTGAAGAGCTGCAGTCACCTCCATAACAAGACCGGCTGGTGGTTTA
ACGAGTGTGGTCTAGCAAATCTAAATGGCATTCATCACTTCTCTGGAAAATTGCTTGCAACTGGAATTCAATGGG
GCACGTGGACCAAAAACAACTCACCTGTCAAGATTAAATCTGTTTCAATGAAAATTAGAAGAATGTACAATCCAT
ATTTTAAGTAATCTCATTTAACATTGTAATGCAAGTTCTACAATGATAATATATTAAAGATTTTTAAAAGTTTAT
CTTTTCACTTAGTGTTTCAAACATATTAGGCAAAATTTAACTGTAGATGGCATTTAGATGTTATGAGTTTAATTA
GAAAACTTCAATTTTGTAGTATTCTATAAAAGAAAACATGGCTTATTGTATGTTTTTACTTCTGACTATATTAAC
AATATACAATGAAATTTGTTTCAAGTGAACTACAACTTGTCTTCCTAAAATTTATAGTGATTTAAAGGATTTTG
CCTTTTCTTTGAAGCATTTTTAAACCATAATATGTTGTAAGGAAAATTGAAGGGAATATTTTACTTATTTTTATA
CTTTATATGATTATATAATCTACAGATAATTTCTACTGAAGACAGTTACAATAAATAACTTTATGCAGATTAATA
TATAAGCTACACATGATGTAAAAACCTTACTATTTCTAGGTGATGCCATACCATTTTAAAAGTAGTAAGAGTTTG
CTGCCCAAATAGTTTTTCTTGTTTTCATATCTAATCATGGTTAACTATTTTGTTATTGTTTGTAATAAATATATG
TACTTTTATATCCTGAAAAA

FIGURE 20

MMSPSQASLLFLNVCIFICGEAVQGNCVHHSTDSSVVNIVEDGSNAKDESKSNDTVCKEDCEESCDVKTKITREE
KHFMCRNLQNSIVSYTRSTKKLLRNMMDEQQASLDYLSNQVNELMNRVLLLTTEVFRKQLDPFPHRPVQSHGLDC
TDIKDTIGSVTKTPSGLYIIHPEGSSYPFEVMCDMDYRGGGWTVIQKRIDGIIDFQRLWCDYLDGFGDLLGEFWL
GLKKIFYIVNQKNTSFMLYVALESEDDTLAYASYDNFWLEDETRFFKMHLGRYSGNAGDAFRGLKKEDNQNAMPF
STSDVDNDGCRPACLVNGQSVKSCSHLHNKTGWWFNECGLANLNGIHHFSGKLLATGIQWGTWTKNNSPVKIKSV
SMKIRRMYNPYFK

FIGURE 21A

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GGCTTCTACAGTCCACAACACCCACCAGCCCCAGGCCCAGCAGAATGAGCCCAGTGAGTGCCGGGGCTCCCAGTT
TGGCTGTTGCTATGACAACGTGGCCACTGCAGCCGGTCCTCTTGGGGAAGGCTGTGTGGGCCAGCCCAGCCATGC
CTACCCCGTGCGGTGCCTGCTGCCCAGTGCCCATGGCTCTTGTGCAGACTGGGCTGCCCGCTGGTACTTCGTTGC
CTCTGTGGGCCAATGTAACCGCTTCTGGTATGGCGGCTGCCATGGCAATGCCAATAACTTTGCCTCGGAGCAAGA
GTGCATGAGCAGCTGCCAGGGATCTCTCC**ATG**GGCCCCGTCGTCCCCAGCCTGGGGCTTCTGGAAGGAGCACCCA
CACGGATGGTGGCGGCAGCAGTCCTGCAGGCGAGCAGGAACCCAGCCAGCACAGGACAGGGGCCGCGGTGCAGAG
AAAGCCCTGGCCTTCTGGTGGTCTCTGGCGGCAAGACCAACAGCCTGGGCCAGGGGAGGCCCCCCACACCCAGGC
CTTTGGAGAATGGCCATGGGGGCAGGAGCTTGGGTCCAGGGCCCCTGGACTGGGTGGAGATGCCGGATCACCAGC
GCCACCCTTCCACAGCTCCTCCTACAGATCTCACTTCCCACCTCTCCAGGATTAGCTTGGCAGGTGTGGAGCCCT
CGTTGGTGCAGGCAGCCCTGGGGCAGTTGGTGCGGCTCTCCTGCTCAGACGACACTGCCCCGGAATCCCAGGCTG
CCTGGCAGAAAGATGGCCAGCCCATCTCCTCTGACAGGCACAGGCTGCAGTTCGACGGATCCCTGATCATCCACC
CCCTGCAGGCAGAGGACGCGGGCACCTACAGCTGTGGCAGCACCCGGCCAGGCCGCGACTCCCAGAAGATCCAAC
TCCGCATTATAGGGGGTGACATGGCCGTGCTGTCTGAGGCTGAGCTGAGCCGCTTCCCTCAGCCCAGGGACCCAG
CTCAGGACTTTGGCCAAGCGGGGGCTGCTGGGCCCCTGGGGGCCATCCCCTCTTCACACCCACAGCCTGCAAACA
GGCTGCGTTTGGACCAGAACCAGCCCCGGGTGGTGGATGCCAGTCCAGGCCAGCGGATCCGGATGACCTGCCGTG
CCGAAGGCTTCCCGCCCCCAGCCATCGAGTGGCAGAGAGATGGGCAGCCTGTCTCTTCTCCCAGACACCAGCTGC
AGCCTGATGGCTCCCTGGTCATTAGCCGAGTGGCTGTAGAAGATGGCGGCTTCTACACCTGTGTCGCTTTCAATG
GGCAGGACCGAGACCAGCGATGGGTCCAGCTCAGAGTTCTGGGGGAGCTGACAATCTCAGGACTGCCCCCTACTG
TGACAGTGCCAGAGGGTGATACGGCCAGGCTATTGTGTGTGGTAGCAGGAGAAAGTGTGAACATCAGGTGGTCCA
GGAACGGGCTACCTGTGCAGGCTGATGGCCACCGTGTCCACCAGTCCCCAGATGGCACGCTGCTCATTTACAACT
TGCGGGCCAGGGATGAGGGCTCCTACATGTGCAGTGCCTACCAGGGGAGCCAGGCAGTCAGCCGCAGCACCGAGG
TGAAGGTGGTCTCACCAGCACCCACCGCCCAGCCCAGGGACCCTGGCAGGGACTGCGTCGACCAGCCAGAGCTGG
CCAACTGTGATTTGATCCTGCAGGCCCAGCTTTGTGGCAATGAGTATTACTCCAGCTTCTGCTGTGCCAGCTGTT
CACGTTTCCAGCCTCACGCTCAGCCCATCTGGCAG**TAG**GGATGAAGGCTAGTTCCAGCCCCAGTCCAAAATAGTT
CATAGGGCTAGGGAGAAAGGAAGATGGACTCTTGGCTTCCTCTCTCTGGCTGGCAAAGGGAGTTATCTTCTGGAA
TACATTAGCTCTTTCAAAAACCCCACCCAGTGTTTAGCCTCAACGGCAGCCAGTTACCAGCTTCTCTCTGTAGCCT
TCAGCAGTGTTTGCATCTCTGACATAACCACAGGCTGCTGTTTTCAAGAAGAGCAATCTGTTTGGATAAGAAAAA
CCTTTACTTTACAGCTTCCCTTTATAATTTGTTACACAGGAATAGTTAAATGCATTTGTTTGTTTGTTTTTTGAG
ACGGAGTTTCACTCTTGTTGCCCAGGCTGGAGGGCAATGGCGCGATCTCAGCTCACTGCAACCTCCGTCTCCTGG
GTTCTTGATTCTCCTGTGTCAGCCTTCTGAGTAGCTGGGATTACAGATGCCTATCACCATGCCTGGGTAATTTTT
GTATTTTTAGTTGAGATGGGGGTTTCGCCATGTTGGCCAGGCTGGTCTCGAACTTCTGACCTCAGATGATCTGCCC
GCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCACGCCCAGCCATCAATGCATTTTTTTTATTTT
TTTTTTGAGACAGAGTTTCGCACTTCTTGCCCAGGCTGGAGTACAATGGTGCGATCTTGGCTCACTGCAACCTCC
ACCTCCTGGGTTCAAGCGCTTCTCCAGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGTATGTGCCACCATGCCT
GGCTAATTTTGTATTTTTGGTGGAGACGGGGTTTCTCCATGTTGGTCAGACTGGTCTTGAACTCCCGACCTCAGG
TAATCCGCCCGCCTCCGCCTCCCAAAATGCTGGGATTAGAGGTGTGAGCCACTGTGCCCAGCCCATCAATGTGTT
TTAAAGCTAGCTGTCAGGGTTCCACTTAATTTAAAGCTGGGCAGGGAGATGTGTAATGATTTCAAAGTTAACACC
TGTTTGTTTTCTAAAGGGCATGCCAAGTCCTGCTGTATCAGGGAAGTATTCTGTGCTAAAATCAGCGATGGTTCA
TTGCTCTAGTCTCTCTCACCCTTCTAGGCAGTGCATCAGTCAGCTCTAAATCTGGTGCAGAGGGTTAACAGCATA
ACCCTTGTTGGCAAAATGGAATAGATGTTAAGACCTCAAATAGGGATTTGGGATGAAACAGCTGCAGTTAGCACT
GTTATCTGAGCATGAAAGAACTGGAAACGCTCCTTACGTCGAGATGTTGGACCTTGAAGCCCTCCTGAGGCCAAC
ATGCAAATCTGGCTGTGACGGTTCATCTGACACCTGTGTAAAGCTGACCAGCCTGCTCTGTACAGTGACAATGAG
GAGCCCCTCTCTTCCTTAAGTAGGAATCTGTGAAGCAAAATGTTTGCTGCCAAAGACAAATCAGACTGTCAGTCA
TTAAAAACAGCATTAGCAGGATGAGGATAGCAATGGGAAGGGTTGTGGGCAATGCAGTAACAGGGAAATGGCTT
CAGAAATGGTTTGAGTTGGAAGACAACATTCTTCATCTCTCAGGACTTCTAATTCCTTGATGCTAAAAGAAGAGG
CATGGATTCTATGAGCTTCCAAGTCCCTTTCCACTTTAACCTTCTACAAATCTTTCAGAGGACTGCCTAGTAGCA
AAGGTTATTCCTGGACACAGGAAAGACGGGCATTACAGGGACCAAAGCTCTGAAAGGTGACTTTTATTACCAACA
CACTGGCTGGAAAAGGGACAAACCACATCACGGGTGAGTGATACTTCTCAGTCTTCTCTACTCATTCAACAAAGG
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FIGURE 21B

AAATGTGGGCTGGGGCAGAGGTCTTTTTTTCATTTAATACTGGAAAAATATTGAAGAGCATCCATGTTCACTTATG
GCTGGTTTTGCTATAGAAATTGGAAAATAAAGGCCACTTTTTTG

FIGURE 22

MGPVVPSLGLLEGAPTRMVAAAVLQASRNPASTGQGPRCRESPGLLVVSGGKTNSLGQGRPPTPRPLENGHGGRS
LGPGPLDWVEMPDHQRHPSTAPPTDLTSHLSRISLAGVEPSLVQAALGQLVRLSCSDDTAPESQAAWQKDGQPIS
SDRHRLQFDGSLIIHPLQAEDAGTYSCGSTRPGRDSQKIQLRIIGGDMAVLSEAELSRFPQPRDPAQDFGQAGAA
GPLGAIPSSHPQPANRLRLDQNQPRVVDASPGQRIRMTCRAEGFPPPAIEWQRDGQPVSSPRHQLQPDGSLVISR
VAVEDGGFYTCVAFNGQDRDQRWVQLRVLGELTISGLPPTVTVPEGDTARLLCVVAGESVNIRWSRNGLPVQADG
HRVHQSPDGTLLIYNLRARDEGSYMCSAYQGSQAVSRSTEVKVVSPAPTAQPRDPGRDCVDQPELANCDLILQAQ
LCGNEYYSSFCCASCSRFQPHAQPIWQ

FIGURE 23

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TCGAGGTCGACATTTATACCGTCTGAGGGTAGCAGCTCGAAAGTAGAAGAAAGTGTTGCCAGGGACGGCAGTATC
TCTTTGTGTGACCCTGGCGGCTTATGGGACGTTGGCTTCAGACCTTTGTGATACACCATGCTGCGTGGGACGATG
ACGGCGTGGAGAGGAATGAGGCCTGAGGTCACACTGGCTTGCCTCCTCCTAGCCACAGCAGGCTGCTTTGCTGAC
TTGAACGAGGTCCCTCAGGTCACCGTCCAGCCTGCGTCCACCGTCCAGAAGCCCGGAGGCACTGTGATCTTGGGC
TGCGTGGTGGAACCTCCAAGGATGAATGTAACCTGGCGCCTGAATGGAAAGGAGCTGAATGGCTCGGATGATGCT
CTGGGTGTCCTCATCACCCACGGGACCCTCGTCATCACTGCCCTTAACAACCACACTGTGGGACGGTACCAGTGT
GTGGCCCGGATGCCTGCGGGGGCTGTGGCCAGCGTGCCAGCCACTGTGACACTAGCCAATCTCCAGGACTTCAAG
TTAGATGTGCAGCACGTGATTGAAGTGGATGAGGGAAACACAGCAGTCATTGCCTGCCACCTGCCTGAGAGCCAC
CCCAAAGCCCAGGTCCGGTACAGCGTCAAACAAGAGTGGCTGGAGGCCTCCAGAGGTAACTACCTGATCATGCCC
TCAGGGAACCTCCAGATTGTGAATGCCAGCCAGGAGGACGAGGGCATGTACAAGTGTGCAGCCTACAACCCAGTG
ACCCAGGAAGTGAAAACCTCCGGCTCCAGCGACAGGCTACGTGTGCGCCGCTCCACCGCTGAGGCTGCCCGCATC
ATCTACCCCCCAGAGGCCCAAACCATCATCGTCACCAAAGGCCAGAGTCTCATTCTGGAGTGTGTGGCCAGTGGA
ATCCCACCCCCACGGGTCACCTGGGCCAAGGATGGGTCCAGTGTCACCGGCTACAACAAGACGCGCTTCCTGCTG
AGCAACCTCCTCATCGACACCACCAGCGAGGAGGACTCAGGCACCTACCGCTGCATGGCCGACAATGGGGTTGGG
CAGCCCGGGGCAGCGGTCATCCTCTACAATGTCCAGGTGTTTGAACCCCCTGAGGTCACCATGGAGCTATCCCAG
CTGGTCATCCCCTGGGGCCAGAGTGCCAAGCTTACCTGTGAGGTGCGTGGGAACCCCCGCCCTCCGTGCTGTGG
CTGAGGAATGCTGTGCCCCTCATCTCCAGCCAGCGCCTCCGGCTCTCCCGCAGGGCCCTGCGCGTGCTCAGCATG
GGGCCTGAGGACGAAGGCGTCTACCAGTGCATGGCCGAGAACGAGGTTGGGAGCGCCCATGCCGTAGTCCAGCTG
CGGACCTCCAGGCCAAGCATAACCCCAAGGCTATGGCAGGATGCTGAGCTGGCTACTGGCACACCTCCTGTATCA
CCCTCCAAACTCGGCAACCCTGAGCAGATGCTGAGGGGGCAACCGGCGCTCCCCAGACCCCCAACGTCAGTGGGG
CCTGCTTCCCCGCAGTGTCCAGGAGAGAAGGGGCAGGGGGCTCCCGCCGAGGCTCCCATCATCCTCAGCTCGCCC
CGCACCTCCAAGACAGACTCATATGAACTGGTGTGGCGGCCTCGGCATGAGGGCAGTGGCCGGGCGCCAATCCTC
TACTATGTGGTGAAACACCGCAAGGTCACAAATTCCTCTGACGATTGGACCATCTCTGGCATTCCAGCCAACCAG
CACCGCCTGACCCTCACCAGACTTGACCCCGGGAGCTTGTATGAAGTGGAGATGGCAGCTTACAACTGTGCGGGA
GAGGGCCAGACAGCCATGGTCACCTTCCGAACTGGACGGCGGCCCAAACCCGAGATCATGGCCAGCAAAGAGCAG
CAGATCCAGAGACGACCCTGGAGCCAGTCCCCAGAGCAGCAGCCAGCCAGACCACGGCCGCCTCTCCCCCCCCA
GAAGCTCCCGACAGGCCCACCATCTCCACGGCCTCCGAGACCTCAGTGTACGTGACCTGGATTCCCCGTGGGAAT
GGTGGGTTCCCAATCCAGTCCTTCCGTGTGGAGTACAAGAAGCTAAAGAAAGTGGGAGACTGGATTCTGGCCACC
AGCGCCATCCCCCCATCGCGGCTGTCCGTGGAGATCACGGGCCTAGAGAAAGGCACCTCCTACAAGTTTCGAGTC
CGGGCTCTGAACATGCTGGGGGGAGAGCGAGCCCAGCGCCCCCTCTCGGCCCTACGTGGTGTCGGGCTACAGCGGT
CGCGTGTACGAGAGGCCCGTGGCAGGTCCTTATATCACCTTCACGGATGCGGTCAATGAGACCACCATCATGCTC
AAGTGGATGTACATCCCAGCAAGTAACAACAACACCCCAATCCATGGCTTTTATATCTATTATCGACCCACAGAC
AGTGACAATGATAGTGACTACAAGAAGGATATGGTGGAAGGGGACAAGTACTGGCACTCCATCAGCCACCTGCAG
CCAGAGACCTCCTACGACATTAAGATGCAGTGCTTCAATGAAGGAGGGGAGAGCGAGTTCAGCAACGTGATGATC
TGTGAGACCAAAGCTCGGAAGTCTTCTGGCCAGCCTGGTCGACTGCCACCCCCAACTCTGGCCCCACCACAGCCG
CCCCTTCCTGAAACCATAGAGCGGCCGGTGGGCACTGGGGCCATGGTGGCTCGCTCCAGCGACCTGCCCTATCTG
ATTGTCGGGGTCGTCCTGGGCTCCATCGTTCTCATCATCGTCACCTTCATCCCCTTCTGCTTGTGGAGGGCCTGG
TCTAAGCAAAAACATACAACAGACCTGGGTTTTCCTCGAAGTGCCCTTCCACCCTCCTGCCCGTACTATGGTG
CCATTGGGAGGACTCCCAGGCCACCAGGCCAGTGGACAGCCCTACCTCAGTGGCATCAGTGGACGGGCCTGTGCT
AATGGGATCCACATGAATAGGGGCTGCCCCTCGGCTGCAGTGGGCTACCCGGGCATGAAGCCCCAGCAGCACTGC
CCAGGCGAGCTTCAGCAGCAGAGTGACACCAGCAGCCTGCTGAGGCAGACCCATCTTGGCAATGGATATGACCCC
CAAAGTCACCAGATCACGAGGGGTCCCAAGTCTAGCCCGGACGAGGGCTCTTTCTTATACACACTGCCCGACGAC
TCCACTCACCAGCTGCTGCAGCCCCATCACGACTGCTGCCAACGCCAGGAGCAGCCTGCTGCTGTGGGCCAGTCA
GGGGTGAGGAGAGCCCCCGACAGTCCTGTCCTGGAAGCAGTGTGGGACCCTCCATTTCACTCAGGGCCCCCATGC
TGCTTGGGCCTTGTGCCAGTTGAAGAGGTGGACAGTCCTGACTCCTGCCAAGTGAGTGGAGGAGACTGGTGCCCC
CAGCACCCCGTAGGGGCCTACGTAGGACAGGAACCTGGAATGCAGCTCTCCCCGGGGCCACTGGTGCGTGTGTCT
TTTGAAACACCACCTCTCACAATTTAGGCAGAAGCTGATATCCCAGAAAGACTATATATTGTTTTTTTTTTAAAA
AAAAAGTCG
```

FIGURE 24

MLRGTMTAWRGMRPEVTLACLLLATAGCFADLNEVPQVTVQPASTVQKPGGTVILGCVVEPPRMNVTWRLNGKEL
NGSDDALGVLITHGTLVITALNNHTVGRYQCVARMPAGAVASVPATVTLANLQDFKLDVQHVIEVDEGNTAVIAC
HLPESHPKAQVRYSVKQEWLEASRGNYLIMPSGNLQIVNASQEDEGMYKCAAYNPVTQEVKTSGSSDRLRVRRST
AEAARIIYPPEAQTIIVTKGQSLILECVASGIPPPRVTWAKDGSSVTGYNKTRFLLSNLLIDTTSEEDSGTYRCM
ADNGVGQPGAAVILYNVQVFEPPEVTMELSQLVIPWGQSAKLTCEVRGNPPPSVLWLRNAVPLISSQRLRLSRRA
LRVLSMGPEDEGVYQCMAENEVGSAHAVVQLRTSRPSITPRLWQDAELATGTPPVSPSKLGNPEQMLRGQPALPR
PPTSVGPASPQCPGEKGQGAPAEAPIILSSPRTSKTDSYELVWRPRHEGSGRAPILYYVVKHRKVTNSSDDWTIS
GIPANQHRLTLTRLDPGSLYEVEMAAYNCAGEGQTAMVTFRTGRRPKPEIMASKEQQIQRDDPGASPQSSSQPDH
GRLSPPEAPDRPTISTASETSVYVTWIPRGNGGFPIQSFRVEYKKLKKVGDWILATSAIPPSRLSVEITGLEKGT
SYKFRVRALNMLGESEPSAPSRPYVVSGYSGRVYERPVAGPYITFTDAVNETTIMLKWMYIPASNNNTPIHGFYI
YYRPTDSDNDSDYKKDMVEGDKYWHSISHLQPETSYDIKMQCFNEGGESEFSNVMICETKARKSSGQPGRLPPPT
LAPPQPPLPETIERPVGTGAMVARSSDLPYLIVGVVLGSIVLIIVTFIPFCLWRAWSKQKHTTDLGFPRSALPPS
CPYTMVPLGGLPGHQASGQPYLSGISGRACANGIHMNRGCPSAAVGYPGMKPQQHCPGELQQQSDTSSLLRQTHL
GNGYDPQSHQITRGPKSSPDEGSFLYTLPDDSTHQLLQPHHDCCQRQEQPAAVGQSGVRRAPDSPVLEAVWDPPF
HSGPPCCLGLVPVEEVDSPDSCQVSGGDWCPQHPVGAYVGQEPGMQLSPGPLVRVSFETPPLTI

FIGURE 25

CTCAGACCATAGCCTAAACCTCATCGTCCCTATCTGGCCCACCTGGAGCATCCACCTAGAGGATGCCACTAGAGG
AGCCTGGATGCCTGTAGAGTCTGGGGGGCTAGAGTCTTCCCTTTTCAGGCCCAAGAAAGGGAATCAGGCAGACTG
CTGAACAGTAAGTATGACTTTGTAGGCAGCCTTTAGACATAGCTATTCACCAAGCTACCGTAAGCTTTTCACAGT
TTGCTTTTAACAGGCTCTTGTAGGCTGCACATGCTTCCCTAGAAACTTGTCTTCCCTTCTGCGATGTCACACCCC
TAAGCTGGTCCTGAAAAATTGGACATCTCGTCACTCTGTATTCACTGTTCCTCCCAACAAGAGAGTTGTACCCTG
TTTTTAGCTACCCTGGGGAGAGGCTGGCTCAGGAGTCTAGAACAGGGCTAGATTGGGGGGCAACAAGGGGCTACC
ATTTCCCTCCCTTTAGGCTCATGGAGAGTCTACATCCAGCCTTATCTTCTCCCATGGGAAACCAAAGGAGGCTCA
ACATGGTGAGAAGAGAGCATGACATCCAGAGCCAGGCAGCCTACAGCACCTGGGACCACCAGGGAATGGGCACAC
AGCAAGGGTTGGCCTCCCTTCTTGGGCAGTGGAAAAAGTCCTAGAAGGAGTCCATGCTTCTCCCACCAAACATGA
GTACCTGCTGCCCTTGCCCTTGTGCTGAATGCCAAGGACCAAAGAAGATGCCTCCCCACCCAGTGTGGGAAATTC
ACAGGAGTGGCCTGCAGTGCCATCCTC<u>ATG</u>TACATATTCTGCACTGATTGCTGGCTCATCGCTGTGCTCTACTTC
ACTTGGCTGGTGTTTGACTGGAACACACCCAAGAAAGGTGGCAGGAGGTCACAGTGGGTCCGAAACTGGGCTGTG
TGGCGCTACTTTCGAGACTACTTTCCCATCCAGCTGGTGAAGACACACAACCTGCTGACCACCAGGAACTATATC
TTTGGATACCACCCCCATGGTATCATGGGCCTGGGTGCCTTCTGCAACTTCAGCACAGAGGCCACAGAAGTGAGC
AAGAAGTTCCCAGGCATACGGCCTTACCTGGCTACACTGGCAGGCAACTTCCGAATGCCTGTGTTGAGGGAGTAC
CTGATGTCTGGAGGTATCTGCCCTGTCAGCCGGGCACCATAGACTATTTGCTTTCAAAGAATGGGAGTGGCAAT
GCTATCATCATCGTGGTCGGGGGTGCGGCTGAGTCTCTGAGCTCCATGCCTGGCAAGAATGCAGTCACCCTGCGG
AACCGCAAGGGCTTTGTGAAACTGGCCCTGCGTCATGGAGCTGACCTGGTTCCCATCTACTCCTTTGGAGAGAAT
GAAGTGTACAAGCAGGTGATCTTCGAGGAGGGCTCCTGGGGCCGATGGGTCCAGAAGAAGTTCCAGAAATACATT
GGTTTCGCCCCATGCATCTTCCATGGTCGAGGCCTCTTCTCCTCCGACACCTGGGGGCTGGTGCCCTACTCCAAG
CCCATCACCACTGTTGTGGGAGAGCCCATCACCATCCCCAAGCTGGAGCACCCAACCCAGCAAGACATCGACCTG
TACCACACCATGTACATGGAGGCCCTGGTGAAGCTCTTCGACAAGCACAAGACCAAGTTCGGCCTCCCGGAGACT
GAGGTCCTGGAGGTGAAC<u>TGA</u>GCCAGCCTTCGGGGCCAACTCCCTGGAGGAACCAGCTGCAAATCACTTTTTTGC
TCTGTAAATTTGGAAGTGTCATGGGTGTCTGTGGGTTATTTAAAAGAAATTATAACAATTTTGCTAAACCATTAC
AATGTTAGGTCTTTTTTAAGAAGGAAAAAGTCAGTATTTCAAGTTCTTTCACTTCCAGCTTGCCCTGTTCTAGGT
GGTGGCTAAATCTGGGCCTAATCTGGGTGGCTCAGCTAACCTCTCTTCTTCCCTTCCTGAAGTGACAAAGGAAAC
TCAGTCTTCTTGGGGAAGAAGGATTGCCATTAGTGACTTGGACCAGTTAGATGATTCACTTTTTGCCCCTAGGGA
TGAGAGGCGAAAGCCACTTCTCATACAAGCCCCTTTATTGCCACTACCCCACGCTCGTCTAGTCCTGAAACTGCA
GGACCAGTTTCTCTGCCAAGGGGAGGAGTTGGAGAGCACAGTTGCCCCGTTGTGTGAGGGCAGTAGTAGGCATCT
GGAATGCTCCAGTTTGATCTCCCTTCTGCCACCCCTACCTCACCCCTAGTCACTCATATCGGAGCCTGGACTGGC
CTCCAGGATGAGGATGGGGGTGGCAATGACACCCTGCAGGGGAAAGGACTGCCCCCCATGCACCATTGCAGGGAG
GATGCCGCCACCATGAGCTAGGTGGAGTAACTGGTTTTTCTTGGGTGGCTGATGACATGGATGCAGCACAGACTC
AGCCTTGGCCTGGAGCACATGCTTACTGGTGGCCTCAGTTTACCTTCCCCAGATCCTAGATTCTGGATGTGAGGA
AGAGATCCCTCTTCAGAAGGGGCCTGGCCTTCTGAGCAGCAGATTAGTTCCAAAGCAGGTGGCCCCCGAACCCAA
GCCTCACTTTTCTGTGCCTTCCTGAGGGGGTTGGGCCGGGGAGGAAACCCAACCCTCTCCTGTGTGTTCTGTTAT
CTCTTGATGAGATCATTGCACCATGTCAGACTTTTGTATATGCCTTGAAAATAAATGAAAGTGAGAATCCAAAAA
AAAAAAAAAAAA

FIGURE 26

MYIFCTDCWLIAVLYFTWLVFDWNTPKKGGRRSQWVRNWAVWRYFRDYFPIQLVKTHNLLTTRNYIFGYHPHGIM
GLGAFCNFSTEATEVSKKFPGIRPYLATLAGNFRMPVLREYLMSGGICPVSRDTIDYLLSKNGSGNAIIIVVGGA
AESLSSMPGKNAVTLRNRKGFVKLALRHGADLVPIYSFGENEVYKQVIFEEGSWGRWVQKKFQKYIGFAPCIFHG
RGLFSSDTWGLVPYSKPITTVVGEPITIPKLEHPTQQDIDLYHTMYMEALVKLFDKHKTKFGLPETEVLEVN

FIGURE 27

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CATCCTGCAACATGGTGAAACCACGCCTGGCTAATTTTGTTGTATTTTTGGTAGAGATGGGATTTCACCGTGTTA
GCCAGGATTGTCTCAATCTGACCTCATGATCTGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGAGTGC
AACCACACCCGGCCACAAACTTTTTAAGAAGTTAATGAAACCATACCTTTTACATTTTTAATGACAGGAAAATGC
TCACAATAATTGTTAACCCAAAATTCTGGATACAAAAGTACAATCTTTACTGTGTAAATACATGTATATGTACTA
TATGAAAATATACCAAATATCAATAATACTTATCTCTGGGTAAAAACCTCTTCTCATACCCTGTGCTAACAACTT
TTAACAAAAAATTTGCATCACTTTTAAGAATCAAGAAAAATTTCTGAAGGTCATATGGGACAGAAAAAAAAACCA
AGGGAAAAATCACGCCACTTGGGAAAAAAAGATTCGAAATCTGCCTTTTTATAGATTTGTAATTAATAAGGTCCA
GGCTTTCTAAGCAACTTAAATGTTTTGTTTCGAAACAAAGTACTTGTCTGGATGTAGGAGGAAAGGGAGTGATGT
CACTGCCATTATGATGCCCCTTGAATATAAGACCCTACTTGCTATCTCCCCTGCACCAGCCAGGAGCCACCCATC
CTCCAGCACACTGAGCAGCAAGCTGGACACACGGCACACTGATCCAA**ATG**GGTAAGGGGATGGTGGCGATGCTCA
TTCTGGGTCTGCTACTTCTGGCGCTGCTCCTACCCGTGCAGGTTTCTTCATTTGTTCCTTTAACCAGTATGCCGG
AAGCTACTGCAGCCGAAACCACAAAGCCCTCCAACAGTGCCCTACAGCCTACAGCCGGTCTCCTTGTGGTCTTGC
TTGCCCTTCTACATCTCTACCAT**TAA**GAGGCAGGTCAAGAAACAGCTACAGTTCTCCAACCCATACACTAAAACC
GAATCCAAATGGTGCCTAGAAGTTCAATGTGGCAAGGAAAAAAACCAGGTCTTCATCAAATCTACTAATTTCACT
CCTTATTAACAGAGAAACGCTTGAGAGTCTCAAACTGGACTGGTTTAAAGAGCATCTGAAGGATTTGACTAGATG
ATAAATGCCTGTACTCCCAGTACTTTGGGAGGCCTAGGCCGGCGGATCACCTGAGGTCAGGAGTTTGAGACTAAC
CTGGCCAAAATGGTGAAACCCCATCTGTACTAAAAATACAAATATTGACTGGGCGTGGTGGTGAGTGCCTGTGAT
CCCAGCTACTCAGGTGGCTGAAGCAGGACAATCACTTGAACTCAGGAGGCAGAGGTTGCAGTGAGCTGAGATCGC
GCTACTGCACTCTAGCCTAGCCTGGGCAACAGAGTGAGACTTCGTCTCAAAAAAAAAAAAAAGCCAAGTGCAGTGGC
TCACGCCTGTAATCCCGGCACTTTGGGAGGCCGAGGTGGGCGGATCACGAGGTCAGGAGATCAAGACCATCCTGG
CTAATACAGTGAAACCCTGTCTCTACTAAAAATACAAAAAATTAGCCGGGGATGGTGGCAGGCACCTGGAGTCCC
AGCTACTCGGGAGGCTGAGGCAGGAGAATAGCGTGAACTCAGGAGGCGGAGCTTGCAGTGAGCCGAGATTGCGCT
ACTGCACTCCAGCCTGGGCGACAGCGCGAGACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 28

MGKGMVAMLILGLLLLALLLPVQVSSFVPLTSMPEATAAETTKPSNSALQPTAGLLVVLLALLHLYH

FIGURE 29

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GGCACGAGGAGGTGTGGACGCTGTGTATGAAATGTCTTTCCTCCAGGACCCAAGTTTCTTCACCATGGGGATGTG
GTCCATTGGTGCAGGAGCCCTGGGGGCTGCTGCCTTGGCATTGCTGCTTGCCAACACAGACGTGTTTCTGTCCAA
GCCCCAGAAAGCGGCCCTGGAGTACCTGGAGGATATAGACCTGAAAACACTGGAGAAGGAACCAAGGACTTTCAA
AGCAAAGGAGCTATGGGAAAAAAATGGAGCTGTGATTATGGCCGTGCGGAGGCCAGGCTGTTTCCTCTGTCGAGA
GGAAGCTGCGGATCTGTCCTCCCTGAAAAGCATGTTGGACCAGCTGGGCGTCCCCCTCTATGCAGTGGTAAAGGA
GCACATCAGGACTGAAGTGAAGGATTTCCAGCCTTATTTCAAAGGAGAAATCTTCCTGGATGAAAAGAAAAAGTT
CTATGGTCCACAAAGGCGGAAGATGATGTTTATGGGATTTATCCGTCTGGGAGTGTGGTACAACTTCTTCCGAGC
CTGGAACGGAGGCTTCTCTGGAAACCTGGAAGGAGAAGGCTTCATCCTTGGGGGAGTTTTCGTGGTGGGATCAGG
AAAGCAGGGCATTCTTCTTGAGCACCGAGAAAAAGAATTTGGAGACAAAGTAAACCTACTTTCTGTTCTGGAAGC
TGCTAAGATGATCAAACCACAGACTTTGGCCTCAGAGAAAAAATGATTGTGTGAAACTGCCCAGCTCAGGGATAA
CCAGGGACATTCACCTGTGTTCATGGGATGTATTGTTTCCACTCGTGTCCCTAAGGAGTGAGAAACCCATTTATA
CTCTACTCTCAGTATGGATTATTAATGTATTTTAATATTCTGTTTAGGCCCACTAAGGCAAAATAGCCCCAAAAC
AAGACTGACAAAAATCTGAAAAACTAATGAGGATTATTAAGCTAAAACCTGGGAAATAGGAGGCTTAAAATTGAC
TGCCAGGCTGGGTGCAGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGAGCAAGTCACTTGAGG
TCGGGAGTTCGAGACCAGCCTGAGCAACATGGCGAAACCCCGTCTCTACTAAAAATACAAAAATCACCCGGGTGT
GGTGGCAGGCACCTGTAGTCCCAGCTACCCGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGT
TGCGGTGAGCTGAGATCACACCACTGTATTCCAGCCTGGGTGACTGAGACTCTAACTAAAAAAAAAAAAAAAAAAA
AAA
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FIGURE 30

MWSIGAGALGAAALALLLANTDVFLSKPQKAALEYLEDIDLKTLEKEPRTFKAKELWEKNGAVIMAVRRPGCFLĊ
REEAADLSSLKSMLDQLGVPLYAVVKEHIRTEVKDFQPYFKGEIFLDEKKKFYGPQRRKMMFMGFIRLGVWYNFF
RAWNGGFSGNLEGEGFILGGVFVVGSGKQGILLEHREKEFGDKVNLLSVLEAAKMIKPQTLASEKK

FIGURE 31

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GTGTGGGGAAGGTAGATGTCATTCAAGAACCAGGTTTGAGTGGCCGCTTCTTTGTCACCACTCTCCCAGCATTTT
TTCATGCAAAGGATGGGATATTCCGCCGTTATCGTGGCCCAGGAATCTTCGAAGACCTGCAGAATTATATCTTAG
AGAAGAAATGGCAATCAGTCGAGCCTCTGACTGGCTGGAAATCCCCGGCTTCTCTAACGATGTCTGGAATGGCTG
GTCTTTTTAGCATCTCTGGCAAGATATGGCATCTTCACAACTATTTCACAGTGACTCTTGGAATTCCTGCTTGGT
GTTCTTATGTCTTTTTCGTCATAGCCACCTTGGTTTTTGGCCTTTTTATGGGTCTGGTCTTGGTGGTAATATCAG
AATGTTTCTATGTGCCACTTCCAAGGCATTTATCTGAGCGTTCTGAGCAGAATCGGAGATCAGAGGAGGCTCATA
GAGCTGAACAGTTGCAGGATGCGGAGGAGGAAAAAGATGATTCAAATGAAGAAGAAAACAAAGACAGCCTTGTAG
ATGATGAAGAAGAGAAAGAAGATCTTGGCGATGAGGATGAAGCAGAGGAAGAAGAGGAGGAGGACAACTTGGCTG
CTGGTGTGGATGAGGAGAGAAGTGAGGCCAATGATCAGGGGCCCCCAGGAGAGGACGGTGTGACCCGGGAGGAAG
TAGAGCCTGAGGAGGCTGAAGAAGGCATCTCTGAGCAACCCTGCCCAGCTGACACAGAGGTGGTGGAAGACTCCT
TGAGGCAGCGTAAAAGTCAGCATGCTGACAAGGGACTGTAGATTTAATGATGCGTTTTCAAGAATACACACCAAA
ACAATATGTCAGCTTCCCTTTGGCCTGCAGTTTGTACCAAATCCTTAATTTTTCCTGAATGAGCAAGCTTCTCTT
AAAAGATGCTCTCTAGTCATTTGGTCTCATGGCAGTAAGCCTCATGTATACTAAGGAGAGTCTTCCAGGTGTGAC
AATCAGGATATAGAAAAACAAACGTAGTGTTGGGATCTGTTTGGAGACTGGGATGGGAACAAGTTCATTTACTTA
GGGGTCAGAGAGTCTCGACCAGAGGAGGCCATTCCCAGTCCTAATCAGCACCTTCCAGAGACAAGGCTGCAGGCC
CTGTGAAATGAAAGCCAAGCAGGAGCCTTGGCTCCTGAGCATCCCCAAAGTGTAACGTAGAAGCCTTGCATCCTT
TTCTTGTGTAAAGTATTTATTTTTGTCAAATTGCAGGAAACATCAGGCACCACAGTGCATGAAAAAATCTTTCACA
GCTAGAAATTGAAAGGGCCTTGGGTATAGAGAGCAGCTCAGAAGTCATCCCAGCCCTCTGAATCTCCTGTGCTAT
GTTTTATTTCTTACCTTTAATTTTTCCAGCATTTCCACCATGGGCATTCAGGCTCTCCACACTCTTCACTATTAT
CTCTTGGTCAGAGGACTCCAATAACAGCCAGGTTTACATGAACTGTGTTTGTTCATTCTGACCTAAGGGGTTTAG
ATAATCAGTAACCATAACCCCTGAAGCTGTGACTGCCAAACATCTCAAATGAAATGTTGTGGCCATCAGAGACTC
AAAAGGAAGTAAGGATTTTACAAGACAGATTAAAAAAAAATTGTTTTGTCCAAAATATAGTTGTTGTTGATTTTT
TTTTAAGTTTTCTAAGCAATATTTTTCAAGCCAGAAGTCCTCTAAGTCTTGCCAGTACAAGGTAGTCTTGTGAAG
AAAAGTTGAATACTGTTTTGTTTTCATCTCAAGGGGTTCCCTGGGTCTTGAACTACTTTAATAATAACTAAAAAA
CCACTTCTGATTTTCCTTCAGTGATGTGCTTTTGGTGAAAGAATTAATGAACTCCAGTACCTGAAAGTGAAAGAT
TTGATTTTGTTTCCATCTTCTGTAATCTTCCAAAGAATTATATCTTTGTAAATCTCTCAATACTCAATCTACTGT
AAGTACCCAGGGAGGCTAATTTCCTTAAAAAAAAAAAAAAATCTATCCATCTACTTCTCTCTTACCTGATTTATGTGT
TAGAATAAATTCATGAAATTCGATTCCAAGCATA
```

FIGURE 32

MSGMAGLFSISGKIWHLHNYFTVTLGIPAWCSYVFFVIATLVFGLFMGLVLVVISECFYVPLPRHLSERSEQNRR
SEEAHRAEQLQDAEEEKDDSNEEENKDSLVDDEEEKEDLGDEDEAEEEEEEDNLAAGVDEERSEANDQGPPGEDG
VTREEVEPEEAEEGISEQPCPADTEVVEDSLRQRKSQHADKGL

FIGURE 33

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CCCTTTAAAGGGTGACTCGTCCCACTTGTGTTCTCTCTCCTGGTGCAGAGTTGCAAGCAAGTTTATCAGAGTATC
GCCATGAAGTTCGTCCCCTGCCTCCTGCTGGTGACCTTGTCCTGCCTGGGGACTTTGGGTCAGGCCCCGAGGCAA
AAGCAAGGAAGCACTGGGGAGGAATTCCATTTCCAGACTGGAGGGAGAGATTCCTGCACTATGCGTCCCAGCAGC
TTGGGGCAAGGTGCTGGAGAAGTCTGGCTTCGCGTCGACTGCCGCAACACAGACCAGACCTACTGGTGTGAGTAC
AGGGGGCAGCCCAGCATGTGCCAGGCTTTTGCTGCTGACCCCAAACCTTACTGGAATCAAGCCCTGCAGGAGCTG
AGGCGCCTTCACCATGCGTGCCAGGGGGCCCCGGTGCTTAGGCCATCCGTGTGCAGGGAGGCTGGACCCCAGGCC
CATATGCAGCAGGTGACTTCCAGCCTCAAGGGCAGCCCAGAGCCCAACCAGCAGCCTGAGGCTGGGACGCCATCT
CTGAGGCCCAAGGCCACAGTGAAACTCACAGAAGCAACACAGCTGGGAAAGGACTCGATGGAAGAGCTGGGAAAA
GCCAAACCCACCACCCGACCCACAGCCAAACCTACCCAGCCTGGACCCAGGCCCGGAGGGAATGAGGAAGCAAAG
AAGAAGGCCTGGGAACATTGTTGGAAACCCTTCCAGGCCCTGTGCGCCTTTCTCATCAGCTTCTTCCGAGGGTGA

CAGGTGAAAGACCCCTACAGATCTGACCTCTCCCTGACAGACAACCATCTCTTTTTATATTATGCCGCTTTCAAT
CCAACGTTCTCACACTGGAAGAAGAGAGTTTCTAATCAGATGCAACGGCCCAAATTCTTGATCTGCAGCTTCTCT
GAAGTTTGGAAAAGAAACCTTCCTTTCTGGAGTTTGCAGAGTTCAGCAATATGATAGGGAACAGGTGCTGATGGG
CCCAAGAGTGACAAGCATACACAACTACTTATTATCTGTAGAAGTTTTGCTTTGTTGATCTGAGCCTTCTATGAA
AGTTTAAATATGTAACGCATTCATGAATTTCCAGTGTTCAGTAAATAGCAGCTATGTGTGTGCAAAATAAAAGAA
TGATTTCAGAAAT
```

FIGURE 34

MKFVPCLLLVTLSCLGTLGQAPRQKQGSTGEEFHFQTGGRDSCTMRPSSLGQGAGEVWLRVDCRNTDQTYWCEYR
GQPSMCQAFAADPKPYWNQALQELRRLHHACQGAPVLRPSVCREAGPQAHMQQVTSSLKGSPEPNQQPEAGTPSL
RPKATVKLTEATQLGKDSMEELGKAKPTTRPTAKPTQPGPRPGGNEEAKKKAWEHCWKPFQALCAFLISFFRG

FIGURE 35

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GTTTGGTTCGGGCCCTTGCAAAACCCGAGATGATGAGCCTGTGTGTGGGAGACCCCTGGGTATCCGTGCAGGGCC
CAATGGGACTCTCTTTGTGGCCGATGCATACAAGGGACTATTTGAAGTAAATCCCTGGAAACGTGAAGTGAAACT
GCTGCTGTCCTCCGAGACACCCATTGAGGGGAAGAACATGTCCTTTGTGAATGATCTTACAGTCACTCAGGATGG
GAGGAAGATTTATTTCACCGATTCTAGCAGCAAATGGCAAAGACGAGACTACCTGCTTCTGGTGATGGAGGGCAC
AGATGACGGGCGCCTGCTGGAGTATGATACTGTGACCAGGGAAGTAAAAGTTTTATTGGACCAGCTGCGGTTCCC
GAATGGAGTCCAGCTGTCTCCTGCAGAAGACTTTGTCCTGGTGGCAGAAACAACCATGGCCAGGATACGAAGAGT
CTACGTTTCTGGCCTGATGAAGGGCGGGGCTGATCTGTTTGTGGAGAACATGCCTGGATTTCCAGACAACATCCG
GCCCAGCAGCTCTGGGGGGTACTGGGTGGGCATGTCGACCATCCGCCCTAACCCTGGGTTTTCCATGCTGGATTT
CTTATCTGAGAGACCCTGGATTAAAAGGATGATTTTTAAGCTCTTTAGTCAAGAGACGGTGATGAAGTTTGTGCC
GCGGTACAGCCTCGTCCTAGAACTCAGCGACAGCGGTGCCTTCCGGAGAAGCCTGCATGATCCCGATGGGCTGGT
GGCCACCTACATCAGCGAGGTGCACGAACACGATGGGCACCTGTACCTGGGCTCTTTCAGGTCCCCCTTCCTCTG
CAGACTCAGCCTCCAGGCTGTTTAGCCCTCCCAGATAGCTGCCCCTGCCACGCAGGCCAGGAGTCTTCACACTCA
GGCACCAGGCCTGGTCCAGGAGGAGCTGTGGACACAGTCGTGGTTCAAGTGTCCACATGCACCTGTTAGTCCCTG
AGAGGTGGTGGGAATGGCTGCTTCATTCCTCGAGGATGCCCGGGCCCCACCTGGGCTTGTCTTTCTGTTTAGAGG
GAAGTGTAACATATCTGCCATGAGGAACATAAAATTCATGTAAAGCCATTTTCTCTTAAACAAAACAAAACTTTCT
AAGTACAGTCATTCTCTAGGATTTGGGAAGCTCCTTGCACTTGGAACAGGGCTCAGGTGGGTGGAGCAGTAAGGC
ACTACCCAGAGAGCTTGCTGCTGCGGCCCTGTCCTGCGGCCTCAAAGTTCTTCTTTACTATATATAACGTGCGGT
CATACCTTTCTTCGTTGTGGTGGGGATGGAAGAGCAGAGGGAGCATGGCCCAGGGGTGTTGAGGCCAGCGGTGAG
AGCCGTGTTAGCCAAGACATGGAACTGTGTTCTCAAGGGTTATGTGGGGCGTGGGCTCTCCATAGTGTGTATGAA
AAGCTTGTTGACTCTAGCGGCTCAGAGAGGACTTTGCTGGGTTTCTTTCTGTGAATATCTCCGTGCTGACCATGC
TGGAATTGGATGATTCTGCAATTCGGGACCTACTGCAGGGGTCCGTTTAGTAACGTCTTGTCTGTGATCTTTGTT
CTTGACCTCTAGACCCCAAGATGTGAACAGTGCACGTGTTAATGTCATCTTTGCTCATGTGTTATAAGCCCCAAG
TTGCTGTATATTTTCACAAGTATGTCTACACACTGGTCATGATTTTGATAATAAATAACGATAAATCGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 36

MSFVNDLTVTQDGRKIYFTDSSSKWQRRDYLLLVMEGTDDGRLLEYDTVTREVKVLLDQLRFPNGVQLSPAEDFV
LVAETTMARIRRVYVSGLMKGGADLFVENMPGFPDNIRPSSSGGYWVGMSTIRPNPGFSMLDFLSERPWIKRMIF
KLFSQETVMKFVPRYSLVLELSDSGAFRRSLHDPDGLVATYISEVHEHDGHLYLGSFRSPFLCRLSLQAV

FIGURE 37

GCCCGGAGAGCCGCATCTATTGGCAGCTTTGTTATTGATCAGAAACTGCTCGCCGCCGACTTGGCTTCCAGTCTG
GCTGCGGGCAACCCTTGAGTTTTCGCCTCTGTCCTGTCCCCCGAACTGACAGGTGCTCCCAGCAACTTGCTGGGG
ACTTCTCGCCGCTCCCCCGCGTCCCCACCCCCTCATTCCTCCCTCGCCTTCACCCCCACCCCCACCACTTCGCCA
CAGCTCAGGATTTGTTTAAACCTTGGGAAACTGGTTCAGGTCCAGGTTTTGCTTTGATCCTTTTCAAAAACTGGA
GACACAGAAGAGGGCTCTAGGAAAAAGTTTTGGATGGGATTATGTGGAAACTACCCTGCGATTCTCTGCTGCCAG
AGCAGGCTCGGCGCTTCCACCCCAGTGCAGCCTTCCCCTGGCGGTGGTGAAAGAGACTCGGGAGTCGCTGCTTCC
AAAGTGCCCGCCGTGAGTGAGCTCTCACCCCAGTCAGCCAA**ATG**AGCCTCTTCGGGCTTCTCCTGCTGACATCTG
CCCTGGCCGGCCAGAGACAGGGGACTCAGGCGGAATCCAACCTGAGTAGTAAATTCCAGTTTTCCAGCAACAAGG
AACAGAACGGAGTACAAGATCCTCAGCATGAGAGAATTATTACTGTGTCTACTAATGGAAGTATTCACAGCCCAA
GGTTTCCTCATACTTATCCAAGAAATACGGTCTTGGTATGGAGATTAGTAGCAGTAGAGGAAAATGTATGGATAC
AACTTACGTTTGATGAAAGATTTGGGCTTGAAGACCCAGAAGATGACATATGCAAGTATGATTTTGTAGAAGTTG
AGGAACCCAGTGATGGAACTATATTAGGGCGCTGGTGTGGTTCTGGTACTGTACCAGGAAAACAGATTTCTAAAG
GAAATCAAATTAGGATAAGATTTGTATCTGATGAATATTTTCCTTCTGAACCAGGGTTCTGCATCCACTACAACA
TTGTCATGCCACAATTCACAGAAGCTGTGAGTCCTTCAGTGCTACCCCCTTCAGCTTTGCCACTGGACCTGCTTA
ATAATGCTATAACTGCCTTTAGTACCTTGGAAGACCTTATTCGATATCTTGAACCAGAGAGATGGCAGTTGGACT
TAGAAGATCTATATAGGCCAACTTGGCAACTTCTTGGCAAGGCTTTTGTTTTTGGAAGAAAATCCAGAGTGGTGG
ATCTGAACCTTCTAACAGAGGAGGTAAGATTATACAGCTGCACACCTCGTAACTTCTCAGTGTCCATAAGGGAAG
AACTAAAGAGAACCGATACCATTTTCTGGCCAGGTTGTCTCCTGGTTAAACGCTGTGGTGGGAACTGTGCCTGTT
GTCTCCACAATTGCAATGAATGTCAATGTGTCCCAAGCAAAGTTACTAAAAAAATACCACGAGGTCCTTCAGTTGA
GACCAAAGACCGGTGTCAGGGGATTGCACAAATCACTCACCGACGTGGCCCTGGAGCACCATGAGGAGTGTGACT
GTGTGTGCAGAGGGAGCACAGGAGGA**TAG**CCGCATCACCACCAGCAGCTCTTGCCCAGAGCTGTGCAGTGCAGTG
GCTGATTCTATTAGAGAACGTATGCGTTATCTCCATCCTTAATCTCAGTTGTTTGCTTCAAGGACCTTTCATCTT
CAGGATTTACAGTGCATTCTGAAAGAGGAGACATCAAACAGAATTAGGAGTTGTGCAACAGCTCTTTTGAGAGGA
GGCCTAAAGGACAGGAGAAAAGGTCTTCAATCGTGGAAAGAAAATTAAATGTTGTATTAAATAGATCACCAGCTA
GTTTCAGAGTTACCATGTACGTATTCCACTAGCTGGGTTCTGTATTTCAGTTCTTTCGATACGGCTTAGGGTAAT
GTCAGTACAGGAAAAAAACTGTGCAAGTGAGCACCTGATTCCGTTGCCTTGCTTAACTCTAAAGCTCCATGTCCT
GGGCCTAAAATCGTATAAAATCTGGATTTTTTTTTTTTTTTTGCTCATATTCACATATGTAAACCAGAACATTC
TATGTACTACAAACCTGGTTTTTAAAAAGGAACTATGTTGCTATGAATTAAACTTGTGTCGTGCTGATAGGACAG
ACTGGATTTTTCATATTTCTTATTAAAAATTTCTGCCATTTAGAAGAAGAGAACTACATTCATGGTTTGGAAGAGA
TAAACCTGAAAAGAAGAGTGGCCTTATCTTCACTTTATCGATAAGTCAGTTTATTTGTTTCATTGTGTACATTTT
TATATTCTCCTTTTGACATTATAACTGTTGGCTTTTCTAATCTTGTTAAATATATCTATTTTTACCAAAGGTATT
TAATATTCTTTTTTATGACAACTTAGATCAACTATTTTTAGCTTGGTAAATTTTTCTAAACACAATTGTTATAGC
CAGAGGAACAAAGATGATATAAAATATTGTTGCTCTGACAAAAATACATGTATTTCATTCTCGTATGGTGCTAGA
GTTAGATTAATCTGCATTTTAAAAAACTGAATTGGAATAGAATTGGTAAGTTGCAAAGACTTTTTGAAAATAATT
AAATTATCATATCTTCCATTCCTGTTATTGGAGATGAAAATAAAAAGCAACTTATGAAAGTAGACATTCAGATCC
AGCCATTACTAACCTATTCCTTTTTTGGGGAAATCTGAGCCTAGCTCAGAAAAACATAAAGCACCTTGAAAAAGA
CTTGGCAGCTTCCTGATAAAGCGTGCTGTGCTGTGCAGTAGGAACACATCCTATTTATTGTGATGTTGTGGTTTT
ATTATCTTAAACTCTGTTCCATACACTTGTATAAATACATGGATATTTTTATGTACAGAAGTATGTCTCTTAACC
AGTTCACTTATTGTACTCTGGCAATTTAAAAGAAAATCAGTAAAATATTTGCTTGTAAAATGCTTAATATCGTG
CCTAGGTTATGTGGTGACTATTTGAATCAAAAATGTATTGAATCATCAAATAAAAGAATGTGGCTATTTTGGGGA
GAAAATT

FIGURE 38

MSLFGLLLLTSALAGQRQGTQAESNLSSKFQFSSNKEQNGVQDPQHERIITVSTNGSIHSPRFPHTYPRNTVLVW
RLVAVEENVWIQLTFDERFGLEDPEDDICKYDFVEVEEPSDGTILGRWCGSGTVPGKQISKGNQIRIRFVSDEYF
PSEPGFCIHYNIVMPQFTEAVSPSVLPPSALPLDLLNNAITAFSTLEDLIRYLEPERWQLDLEDLYRPTWQLLGK
AFVFGRKSRVVDLNLLTEEVRLYSCTPRNFSVSIREELKRTDTIFWPGCLLVKRCGGNCACCLHNCNECQCVPSK
VTKKYHEVLQLRPKTGVRGLHKSLTDVALEHHEECDCVCRGSTGG

FIGURE 39

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GGGGGCCCTCTGCCCGGGTTGTCCAAGATGGAGGGCGCTCCACCGGGGTCGCTCGCCCTCCGGCTCCTGCTGTTC
GTGGCGCTACCCGCCTCCGGCTGGCTGACGACGGGCGCCCCCGAGCCGCCGCCGCTGTCCGGAGCCCCACAGGAC
GGCATCAGAATTAATGTAACTACACTGAAAGATGATGGGGACATATCTAAACAGCAGGTTGTTCTTAACATAACC
TATGAGAGTGGACAGGTGTATGTAAATGACTTACCTGTAAATAGTGGTGTAACCCGAATAAGCTGTCAGACTTTG
ATAGTGAAGAATGAAAATCTTGAAAATTTGGAGGAAAAAGAATATTTTGGAATTGTCAGTGTAAGGATTTTAGTT
CATGAGTGGCCTATGACATCTGGTTCCAGTTTGCAACTAATTGTCATTCAAGAAGAGGTAGTAGAGATTGATGGA
AAACAAGTTCAGCAAAAGGATGTCACTGAAATTGATATTTTAGTTAAGAACCGGGGAGTACTCAGACATTCAAAC
TATACCCTCCCTTTGGAAGAAAGCATGCTCTACTCTATTTCTCGAGACAGTGACATTTTATTTACCCTTCCTAAC
CTCTCCAAAAAAGAAAGTGTTAGTTCACTGCAAACCACTAGCCAGTATCTTATCAGGAATGTGGAAACCACTGTA
GATGAAGATGTTTTACCTGGCAAGTTACCTGAAACTCCTCTCAGAGCAGAGCCGCCATCTTCATATAAGGTAATG
TGTCAGTGGATGGAAAAGTTTAGAAAAGATCTGTGTAGGTTCTGGAGCAACGTTTTCCCAGTATTCTTTCAGTTT
TTGAACATCATGGTGGTTGGAATTACAGGAGCAGCTGTGGTAATAACCATCTTAAAGGTGTTTTTCCCAGTTTCT
GAATACAAAGGAATTCTTCAGTTGGATAAAGTGGACGTCATACCTGTGACAGCTATCAACTTATATCCAGATGGT
CCAGAGAAAGAGCTGAAAACCTTGAAGATAAAACATGTATTTAAAACGCCATCTCATATCATGGACTCCGAAGT
AGCCTGTTGCCTCCAAATTTGCCACTTGAATATAATTTTCTTTAAATCGTTAAGAATCAGTTTCAAAAAAAAAAA
AAAAAAAAAAAAAAAAA
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FIGURE 40

MEGAPPGSLALRLLLFVALPASGWLTTGAPEPPPLSGAPQDGIRINVTTLKDDGDISKQQVVLNITYESGQVYVN
DLPVNSGVTRISCQTLIVKNENLENLEEKEYFGIVSVRILVHEWPMTSGSSLQLIVIQEEVVEIDGKQVQQKDVT
EIDILVKNRGVLRHSNYTLPLEESMLYSISRDSDILFTLPNLSKKESVSSLQTTSQYLIRNVETTVDEDVLPGKL
PETPLRAEPPSSYKVMCQWMEKFRKDLCRFWSNVFPVFFQFLNIMVVGITGAAVVITILKVFFPVSEYKGILQLD
KVDVIPVTAINLYPDGPEKRAENLEDKTCI

FIGURE 41

CTGAGCGGGGGAGCGGCGGCCCCCAGCTGAATGGGCGCGAGAGCGGCGCTGGGGGCGGGTGGGGGCGCGGGGTAC
CGGGCTGGCGGCCGGCCGGCGCCCCCTCATTAGTATGCGGACGAAGGCGGCGGGCTGCGCGGAGCGGCGTCCCCT
GCAGCCGCGGACCGAGGCAGCGGCGGCACCTGCCGGCCGAGCAATGCCAAGTGAGTACACCTATGTGAAACTGAG
AAGTGATTGCTCGAGGCCTTCCCTGCAATGGTACACCCGAGCTCAAAGCAAGATGAGAAGGCCCAGCTTGTTATT
AAAAGACATCCTCAAATGTACATTGCTTGTGTTTGGAGTGTGGATCCTTTATATCCTCAAGTTAAATTATACTAC
TGAAGAATGTGACATGAAAAAAATGCATTATGTGGACCCTGACCGTGTAAAGAGAGCTCAGAAATATGCTCAGCA
AGTCTTGCAGAAGGAATGTCGTCCCAAGTTTGCCAAGACATCAATGGCGCTGTTATTTGAGCACAGGTATAGCGT
GGACTTACTCCCTTTTGTGCAGAAGGCCCCCAAAGACAGTGAAGCTGAGTCCAAGTACGATCCTCCTTTTGGGTT
CCGGAAGTTCTCCAGTAAAGTCCAGACCCTCTTGGAACTCTTGCCAGAGCACGACCTCCCTGAACACTTGAAAGC
CAAGACCTGTCGGCGCTGTGTGGTTATTGGAAGCGGAGGAATACTGCACGGATTAGAACTGGGCCACACCCTGAA
CCAGTTCGATGTTGTGATAAGGTTAAACAGTGCACCAGTTGAGGGATATTCAGAACATGTTGGAAATAAAACTAC
TATAAGGATGACTTATCCAGAGGGCGCACCACTGTCTGACCTTGAATATTATTCCAATGACTTATTTGTTGCTGT
TTTATTTAAGAGTGTTGATTTCAACTGGCTTCAAGCAATGGTAAAAAAGGAAACCCTGCCATTCTGGGTACGACT
CTTCTTTTGGAAGCAGGTGGCAGAAAAAATCCCACTGCAGCCAAAACATTTCAGGATTTTGAATCCAGTTATCAT
CAAAGAGACTGCCTTTGACATCCTTCAGTACTCAGAGCCTCAGTCAAGGTTCTGGGGCCGAGATAAGAACGTCCC
CACAATCGGTGTCATTGCCGTTGTCTTAGCCACACATCTGTGCGATGAAGTCAGTTTGGCGGGTTTTGGATATGA
CCTCAATCAACCCAGAACACCTTTGCACTACTTCGACAGTCAATGCATGGCTGCTATGAACTTTCAGACCATGCA
TAATGTGACAACGGAAACCAAGTTCCTCTTAAAGCTGGTCAAAGAGGGAGTGGTGAAAGATCTCAGTGGAGGCAT
TGATCGTGAATTTTGAACACAGAAAACCTCAGTTGAAAATGCAACTCTAACTCTGAGAGCTGTTTTTGACAGCCT
TCTTGATGTATTTCTCCATCCTGCAGATACTTTGAAGTGCAGCTCATGTTTTTAACTTTTAATTTAAAAACACAA
AAAAATTTTAGCTCTTCCCACTTTTTTTTTCCTATTTATTTGAGGTCAGTGTTTGTTTTTGCACACCATTTTGT
AAATGAAACTTAAGAATTGAATTGGAAAGACTTCTCAAAGAGAATTGTATGTAACGATGTTGTATTGATTTTTAA
GAAAGTAATTTAATTTGTAAAACTTCTGCTCGTTTACACTGCACATTGAATACAGGTAACTAATTGGAAGGAGAG
GGGAGGTCACTCTTTTGATGGTGGCCCTGAACCTCATTCTGGTTCCCTGCTGCGCTGCTTGGTGTGACCCACGGA
GGATCCACTCCCAGGATGACGTGCTCCGTAGCTCTGCTGCTGATACTGGGTCTGCGATGCAGCGGCGTGAGGCCT
GGGCTGGTTGGAGAAGGTCACAACCCTTCTCTGTTGGTCTGCCTTCTGCTGAAAGACTCGAGAACCAACCAGGGA
AGCTGTCCTGGAGGTCCCTGGTCGGAGAGGGACATAGAATCTGTGACCTCTGACAACTGTGAAGCCACCCTGGGC
TACAGAAACCACAGTCTTCCCAGCAATTATTACAATTCTTGAATTCCTTGGGGATTTTTTACTGCCCTTTCAAAG
CACTTAAGTGTTAGATCTAACGTGTTCCAGTGTCTGTCTGAGGTGACTTAAAAAAATCAGAACAAAACTTCTATTA
TCCAGAGTCATGGGAGAGTACACCCTTTCCAGGAATAATGTTTTGGGAAACACTGAAATGAAATCTTCCCAGTAT
TATAAATTGTGTATTTAAAAAAAAAGAAACTTTTCTGAATGCCTACCTGGCGGTGTATACCAGGCAGTGTGCCAGT
TTAAAAAGATGAAAAGAATAAAAACTTTTGAGG

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FIGURE 42

MRRPSLLLKDILKCTLLVFGVWILYILKLNYTTEECDMKKMHYVDPDRVKRAQKYAQQVLQKECRPKFAKTSMAL
LFEHRYSVDLLPFVQKAPKDSEAESKYDPPFGFRKFSSKVQTLLELLPEHDLPEHLKAKTCRRCVVIGSGGILHG
LELGHTLNQFDVVIRLNSAPVEGYSEHVGNKTTIRMTYPEGAPLSDLEYYSNDLFVAVLFKSVDFNWLQAMVKKE
TLPFWVRLFFWKQVAEKIPLQPKHFRILNPVIIKETAFDILQYSEPQSRFWGRDKNVPTIGVIAVVLATHLCDEV
SLAGFGYDLNQPRTPLHYFDSQCMAAMNFQTMHNVTTETKFLLKLVKEGVVKDLSGGIDREF